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The American University in Cairo  
School of Global Affairs and Public Policy (GAPP)

The Effect of the Development and Restoration Projects on the Culture of Marsh  
Arabs

Submitted to the Center for Migration and Refugee Studies

In Partial Fulfillment of the requirements for  
The degree of Master of Arts  
in Migration and Refugee Studies

Habiba Sherif Ramadan  
Under the supervision of Dr. Ian Anthony Morrison  
Jan 2018

The American University in Cairo

School of Global Affairs & Public Policy (GAPP)

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A Thesis Submitted by

Habiba Sherif Ramadan

Submitted to the Center for Migration and Refugee Studies

[January 2018]

In partial fulfillment of the requirements for  
The degree of Master of Arts  
in Migration and Refugee Studies

has been approved by

Ian Morriosn \_\_\_\_\_

Thesis Supervisor

Affiliation:

Date \_\_\_\_\_

Gerda Heck \_\_\_\_\_

Thesis First Reader

Affiliation:

Date \_\_\_\_\_

Usha Natajaran \_\_\_\_\_

Thesis Second Reader

Affiliation:

Date \_\_\_\_\_

Dr. Ibrahim Awad \_\_\_\_\_

Department Director

Date \_\_\_\_\_

Nabil Fahmy, Ambassador \_\_\_\_\_

Dean of GAPP

Date \_\_\_\_\_

## ABTSRACT

In 1991, the Marsh Arabs of Iraq revolted against the government of Saddam Hussein. Hussein responded by undertaking self-declared development projects in the Marshlands, draining the region of water. Without the ability to practice traditional economic and social activities, which relied on their proximate environment, the majority of the Marsh Arab community was displaced.

The project resulted in the desertification of an area nearly the size of the Aral Sea, what archeologists have described as environmental genocide. In 2003, the US government embarked on a restoration program to divert water back to the marshlands and improve the available social services in marsh region. The project has succeeded in restoring a significant proportion of the marshes. However, large numbers of the Marsh Arabs have not returned to the land, calling into question such a project's ability to achieve more than environmental regeneration.

This thesis examines the effects of environmental destruction and restoration on a community and its culture, using the Marsh Arabs as a case study. It asks whether the US-led environmental restoration program has restored the Marsh Arabs' culture.

This thesis argues that the Hussein's development project led to cultural loss that was not rectified by the American restoration program.

In making this argument the thesis examines changes in:

- a) the economic activities, daily tasks and routines of the Marsh Arabs; and
- b) the transmission of traditional ecological knowledge (TEK) to younger generations.

# CONTENTS

<b>LIST OF FIGURES.....</b>	<b>vii</b>
<b>CHAPTER ONE: Introduction.....</b>	<b>1</b>
1.1- Research Problem.....	1
1.2- The Iraqi Marshlands.....	2
1.3- The Marsh Arabs.....	3
1.4- Political Situation in Late 20 <sup>th</sup> Century Iraq.....	6
1.5- Societal Structure of Iraq.....	8
1.6- Circumstances of the Marsh Arabs Immediately before and during the 1991 Uprising.....	10
1.7- Hussein's Developmental Project.....	13
1.8- The US Restoration Program.....	16
<b>CHAPTER TWO: Literature Review.....</b>	<b>20</b>
2.1- Who are the Marsh Arabs: Overview of the Ecological and Culture Situation of the Marsh Arabs.....	21
2.1.1- <i>Legal discourse</i> .....	21
2.1.2- <i>Ecological discourse</i> .....	23
2.2- The Main Themes of Culture.....	25
2.2.1- <i>Culture as ideational systems</i> .....	25
2.2.2- <i>Culture as adaptive systems</i> .....	27

2.3-	Cultural Change.....	30
2.4-	Cultural Loss.....	33
2.5-	Ecological and Culture Restoration.....	36
<b>CHAPTER THREE: Methodology.....</b>		<b>40</b>
3.1-	Elements of Assessment (indicators).....	40
3.1-1.	<i>First Indicator: The Economic Activities of the Marsh Arabs.....</i>	<i>41</i>
3.1-2.	<i>Second Indicator: The Transmission of Traditional Ecological Knowledge (TEK)</i> <i>to the Younger Generations.....</i>	<i>42</i>
3.2-	Resources and Limitations.....	43
<b>CHAPTER FOUR: The Effect of the Developmental Project on the Land and the Culture</b> <b>of the Marsh Arabs.....</b>		<b>47</b>
4.1-	The Relationship between People, Land and Culture.....	47
4.2-	Analyzing the Effect of the Ecological Setting on the Cultural Features before the Implementation of Hussein's Development Project.....	51
4.2-1.	<i>First Indicator: Economic Activities, Daily Tasks and Routine (Fishing, Farming</i> <i>and Manufacturing Crafts) .....</i>	<i>51</i>
4.2.1.1-	<i>Fishing.....</i>	<i>52</i>
4.2.1.2-	<i>Agriculture.....</i>	<i>53</i>
4.2.1.3-	<i>Manufacturing Crafts.....</i>	<i>54</i>
4.2-2.	<i>Second Indicator: The Transmission of Traditional Ecological Knowledge to the</i> <i>Younger Generations.....</i>	<i>58</i>

4.3-	Analyzing Environmental and Cultural Features after Saddam’s Hussein Developmental Project.....	63
4.3-1.	<i>First Indicator: Economic Activities, Daily Tasks and Routine (Fishing, Farming and Manufacturing Crafts) .....</i>	<i>63</i>
4.3.1.1-	<i>Fishing.....</i>	<i>63</i>
4.3.1.2-	<i>Agriculture.....</i>	<i>64</i>
4.3.1.3-	<i>Manufacturing Crafts.....</i>	<i>65</i>
4.3.2-	<i>Second Indicator: The Transmission of Traditional Ecological Knowledge (TEK) to the Younger Generations .....</i>	<i>66</i>
4.4-	Conclusion.....	68
<b>CHAPTER FIVE: The Effect of the US-Led Restoration Program on the Land and the Culture of the Marsh Arabs.....</b>		<b>73</b>
5.1-	A Brief Overview on the US-led Restoration Program.....	73
5.2-	The Results of the US-led Restoration Program (2003-2006) .....	75
5.3-	The Effect of the US-led Restoration Program on the Culture of the Marsh Arabs.....	76
<b>CHAPTER SIX: CONCLUSION.....</b>		<b>81</b>
<b>Bibliography.....</b>		<b>84</b>

## TABLE OF FIGURES AND PICTURES:

<b>Figure 1:</b> Marsh Arab village in 1974.....	6
<b>Figure 2:</b> Satellite images shows the marshes in February 2002, when they were nearly dry, and in February 2007, after several years of recovery.....	15
<b>Figure 3:</b> Marsh Arabs fishing.....	54
<b>Figure 4:</b> Marsh Arabs manufacturing canoes and boats.....	56
<b>Figure 5:</b> Reed houses.....	58
<b>Figure 6:</b> The Mudhif house.....	63
<b>Figure 7:</b> Women's activities before and after the development project.....	66
<b>Figure 8:</b> Comparison between age groups in regards to economic activities.....	68



## Chapter One

### Introduction

#### 1.1 Research Problem

In 1991, the Marsh Arabs, who at the time inhabited the south-eastern tip of the country, began an uprising against the government of Iraq. In revenge, then Iraqi president Saddam Hussein responded by carrying out a controversial development project in the Marsh Arabs' homeland. The marshes are extremely fertile lands located where the Tigris and Euphrates rivers meet. Hussein diverted the water which feeds this land and was the main lifeline of the ecological system in the area. Not only did this project drain some of the most fertile lands in the Middle East,<sup>1</sup> it also destroyed the habitat of the Marsh Arabs and resulted in the displacement of more than 20,000 of its inhabitants.<sup>2</sup> The Marsh Arabs as a community were exposed to forced displacement caused by an environmental genocide. After the US-led invasion of Iraq in 2003, an international coalition launched ambitious restoration programs with the aim of diverting water back to the marshlands, thereby bringing them back to life. Before analyzing the feasibility of cultural restoration, this chapter will provide a background on the Arab Marsh community and then place their community within the context of Iraq.

This thesis examines whether the ecological restoration of the Marshlands also restored the Marsh Arabs' culture. It acknowledges the inherent challenges of defining culture, as all cultures are continuously changing. Hence, the main research question is: Can the culture of the Marsh Arabs be restored through ecological restoration of the land and its surrounding environment, assuming this culture was severely damaged by Hussein's project?

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<sup>1</sup> S.M. Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009), pp.4- 157. ill. 8. Maps 3.

<sup>2</sup>Ibid

## 1.2 The Iraqi Marshlands

Iraq is the modern-day home of the ancient civilizations of Mesopotamia, the land between the two rivers, and is considered to be one of the most fertile countries rimming the northern edge of the Arabian Peninsula. The terrain is remarkably diverse, making Iraq a country with extreme contrasts. The Twin Rivers, the Euphrates and the Tigris, have shaped the character and identity of Iraq since ancient times. The rivers were considered the sources of life by the people, and hence, the Iraqi people established a deep connection to their land. This relationship dictated their history, their battles and their victories. This could not be truer than it is for the Marsh Arabs, whose lives were built around waterways and wetlands.

The heart of the marshlands, an area referred to as the “central marshes,” is located between the Tigris and Euphrates Rivers. Prior to the draining of the marshes, this area contained some of the most fertile lands in the Middle-East. Together, the marshlands formed a series of interconnected permanent marshes and lakes covering an area of 8,800 square kilometers and extending to 20,000 kilometers.<sup>3</sup> The United Nations Environment Program recognized the marshlands as the most “extensive wetlands” in the Middle-East and West Eurasia.<sup>4</sup>

The Shatt al-Arab river in southern Iraq is a broad waterway with villages spanning both of its banks. The river is formed by the convergence of the Tigris and Euphrates. To the north of the Shatt al-Arab river, a tributary of the Euphrates, villages were inhabited by rice-growers. This natural wetland, with high reeds and hidden waterways, was for 5,000 years,<sup>5</sup> the home of the

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<sup>3</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

<sup>4</sup> UNEP in Iraq, *Post Conflict Assessment, Clean up and Post Construction* (Kenya. 2007), <http://postconflict.unep.ch/publications/iraq.pdf>.

<sup>5</sup> Dave Johns, “The Crimes of Saddam Hussein.” *Frontline World*, 24 January 2006. Accessed September 25, 2017. [http://www.pbs.org/frontlineworld/stories/iraq501/events\\_marsh.html](http://www.pbs.org/frontlineworld/stories/iraq501/events_marsh.html).

Marsh Arabs.<sup>6</sup> Moreover, the marshes were not only integral for the continuity of the Marsh Arabs' culture; they also sustained a unique ecosystem. The marshes served as a wintering habitat for migratory birds and supported globally threatened and endangered species. It also provided a productive shrimp and finfish fishery habitat. Unfortunately, this fertile land was damaged because of Hussein's draining project. When the water in the area was drained, life became impossible.<sup>7</sup>

However, not only were the marshlands rich in agricultural and biodiversity wealth, the region was also the site of some of the richest oil deposits in the country. Iraq's proven oil reserves, estimated to be 112 billion barrels (the second largest reserves, following those of Saudi Arabia), are located in the southern regions. The largest reserve in Iraq is the Majnun field, with consists of 10 -30 billion barrels. The second largest (and perhaps equally sized) is West Qurna, with reserves of 15 billion barrels.<sup>8</sup> Both are located in the marshlands, meaning that the land floats on a sea of oil. Alas, the communities there did not reap the riches of the vast oil reserves, and instead many lived in poverty.<sup>9</sup> The next section provides a comprehensive outlook of Iraq's political and socioeconomic experiences to understand the situation of the Marsh Arabs within the larger context of Iraq.

### **1.3. The Marsh Arabs**

The marshlands were populated by peoples referred to as the Marsh Arabs, "Arab Al Ahwar," (Arabic for Arabs of the Water Basin), or "Ma'adan" (Arabic for Dwellers of the Plain). This

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<sup>6</sup> S.M Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009).

<sup>7</sup> Ibid p 11.

<sup>8</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>9</sup> Patrick Markey and Jon Loades-Carter, "Iraqi tribal disputes pose new challenge to oil firms." *Reuters*, May 29, 2011. Accessed September 26, 2017. <http://www.reuters.com/article/us-iraq-oil-tribes/iraqi-tribal-disputes-pose-new-challenge-to-oil-firms-idUSTRE74S0RP20110529>.

community lived in the Tigris-Euphrates marshlands in south-eastern Iraq on the border with Iran, an area said to have been the location of the Garden of Eden. This indigenous community, a population of approximately 500,000, consists of several predominantly Shi'a tribes.<sup>10</sup> The marshlands spans three of the Iraq's 18 governorates: Missan (originally Al Amara), Dhi Qar (originally Al- Nasiriyya) and Basra. These three governorates have historically received minimal attention from the central government of Iraq, which directed services and resources to the capital, Baghdad.<sup>11</sup>

The characteristics of the marshlands highly dominated the livelihood of the Marsh Arabs. Their communities lived on what they planted and were self-sufficient. The land provided all the elements of livelihood: shelter and food. They built their homes from reeds and used canoes for transportation. Similarly, the economy was structured based on the biological diversity of the land, with an emphasis on agriculture, livestock, birding, mat making and fishing. Thus, the daily life of the Marsh Arabs, and their dynamic and changing culture, were constructed on their relationship to the land and the network of waterways on which they lived.

Fishing was the main source of income for Marsh Arabs before 1991.<sup>12</sup> In 1990, the U.N. Food and Agriculture Organization estimated that the total inland fish catch in Iraq was 23,600 tons and over 60% came from the "Mesopotamian marshes."<sup>13</sup> Another main income-generating activity for the Marsh Arabs was reed mat weaving, with the mats exported to various markets throughout Iraq.

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<sup>10</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>11</sup> Ibid

<sup>12</sup> Ibid

<sup>13</sup> S.M Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009), pp.4- 157. ill. 8. Maps 3.

For the Marsh Arabs to have survived and sustained their economic activities for so long, they needed to hand down knowledge from one generation to the next. Parents taught their children how to fish, farm, make boats, and build houses. Women played a significant role in the daily routine of marshland life; their role was not only limited to the household, as they also worked almost as equals in the community.<sup>14</sup> They were actively involved in community and outdoor activities and had the responsibility of teaching their daughters daily tasks, thus playing a vital role in preserving knowledge for future generations.<sup>15</sup>

To understand the events which led to Hussein's destructive policies towards the Marsh Arabs, it is necessary to understand the politics and social cohesion of late 20<sup>th</sup> century Iraq. The relationship between dissent and religious/ethnic divides played heavily into these policy decisions, as did the government's recent hostilities with Iran and Kuwait. The next section attempts to situate Hussein's punitive development strategy within this larger context.

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<sup>14</sup> Peter Schwartzstein, "Iraq's Marsh Arabs test the waters as wetlands ruined by Saddam are reborn, *The Guardian*, January 18, 2017, accessed September 26, 2017. <https://www.theguardian.com/global-development/2017/jan/18/iraq-marsh-arabs-test-the-waters-wetlands-ruined-by-saddam-reborn-southern-marshes>.

<sup>15</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26, 2017), 2017, <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.



Figure 1: Marsh Arab village in 1974<sup>16</sup>

#### 1.4 Political Situation in Late 20<sup>th</sup> Century Iraq

This section provides a brief overview of the situation in Iraq prior to the 1991 uprising and analyzes how these circumstances contributed to the uprising. Understanding this history and the politics within Iraq is crucial to understanding the Marsh Arabs' humanitarian plight, which was tied to events in Iraq throughout the 1990s and early 2000s.

Iraq is known for its geographical, social and political complexities. Each of the country's provinces enjoys a unique set of characteristics, creating an immensely diverse structure. This diversity has given Iraq both its uniqueness and strength, although it has come with tremendous

<sup>16</sup> "SPIEGEL ONLINE Hamburg." Photo Gallery: Hope for Iraq's Marshes. SPIEGEL ONLINE. July 30, 2010. <http://www.spiegel.de/fotostrecke/photo-gallery-hope-for-iraq-s-marshes-fotostrecke-57722.html>.

challenges. Similarly, few countries have captivated as much of the world's attention or endured as much trauma in recent decades as Iraq. Iraq has been involved in three wars since 1980, each with major social, political and economic consequences. Iraq continues to struggle with the legacy of these conflicts.

Saddam Hussein came to power in 1979, and the following year he led the Iraqi army into war with neighboring Iran. This war lasted 8 years and left more than one million people dead.<sup>17</sup> In the summer of 1990, Hussein set his sights to the south and launched a war to alter the Iraqi-Kuwaiti border. The UN Security Council imposed comprehensive economic sanctions against Iraq on August 6, 1990, just after the invasion of Kuwait.<sup>18</sup>

The following year, the US and a coalition of allies responded by leading a successful, short-lived invasion to drive back the Iraqi forces. When the coalition war had ousted Iraq from Kuwait, the Security Council did not lift the sanctions, keeping them in place as a mean to press for Iraqi disarmament and other concessions. The sanctions remained in place thereafter, despite the harsh impact on Iraqi civilians and an evident lack of pressure on Hussein. A UN "Oil-for-Food Program," started in late 1997, offered some relief to Iraqis, but the humanitarian crisis continued.<sup>19</sup>

Just over a decade into Hussein's rule, Iraq's government faced a politically volatile domestic situation. It responded to the internal turmoil by imposing brutal policies to maintain order. The Marsh Arabs were among the groups victimized by these abuses. To justify these brutal policies, the Iraqi government claimed certain ethnic groups in the country were cooperating with the

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<sup>17</sup> Ian Black, "Iran and Iraq remember war that cost more than a million lives." *The Guardian*, September 23, 2010, accessed September 25, 2017. <https://www.theguardian.com/world/2010/sep/23/iran-iraq-war-anniversary>.

<sup>18</sup> "Sanctions against Iraq." Global Policy Forum, <https://www.globalpolicy.org/previous-issues-and-debate-on-iraq/sanctions-against-iraq.html>.

<sup>19</sup> Ibid

Iranian government.<sup>20</sup> This claim of association with Iran automatically discredited these groups, causing the wider populace to reject them. The domestic oppression which followed the international sanctions directly impacted the Marsh Arabs.

## **1.5 Societal Structure of Iraq**

The complex social structure of Iraqi society challenged Hussein's rule. The Iraqi state struggled to incorporate its extremely diverse peoples into one structure, which contributed to the domestic political struggles. Hussein's policies of repression were not limited to the Marsh Arabs, who are mostly Shia. Other ethnic groups in Iraq also suffered from unfair sectarian treatment.

Iraq's population is mostly Muslim, two thirds of which are Shia Muslims and a third are Sunni Muslim. Since the majority of Kurds are Sunni, the religious divide mainly affects the Arabs.<sup>21</sup>

However, the Iraqi society is often split into three distinct communities: the Arab Shia, the Arab Sunnis, and the Kurds.<sup>22</sup> Arabs constitute 80% of the population, while 20% belong to other ethnic groups. Other ethnicities include: Turkmen, Christians, Baha'is, Circassians, Sunni Kurds, Faili Kurds (Shia Kurds), Jews, Kakis, Sabean-Mandaens, Shabaks and Yazidis. For the purpose of this thesis, I will discuss the Sunni-Shia political divide, as it relates to the conflict between the Marsh Arabs and the government, while acknowledging the hostility of the Hussein government to other groups on the basis of the ethnicity.

The inhabitants of the south of Iraq are mostly Shia Muslims. It is believed that the Shia population in this area grew due to migration from the Arabian Peninsula in the 18<sup>th</sup> and the 19<sup>th</sup> centuries. Beginning under the Ottoman administration of Iraq, they were excluded from major

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<sup>20</sup> Inter displacement Center and Norwegian Refugee Council, *IRAQ: Little new displacement but around 2.8 million Iraqis remain internally displaced, A profile of the internal displacement situation* (Norwegian Refugee Council. 2004.) <http://www.internal-displacement.org/assets/library/Middle-East/Iraq/pdf/Iraq-March-2010.pdf>

<sup>21</sup> Phebe Marr and Ibrahim Al-Marashi, *The Modern History of Iraq* Fourth Edition (London: Avalon Publishing, 2017), 14.

<sup>22</sup> Ibid p.14



political and military positions. As a result, the Shia became completely alienated from political life in Iraq, and their social life was heavily curtailed. They developed their own educational system and they constituted an enclosed minority community inside their country.<sup>23</sup> For many decades, one of the main divisions among the Iraqi population ran along these religious lines, with much of the dissent against Hussein motivated by an objection to his Sunnism.

Up until 2003, the Iraqi Sunni communities had long been in control of the political sphere, even though the Sunni population was smaller than the Shia population. This was a resurging point of friction between the Sunni and the Shia Muslims in Iraq. It was one of the elements predicating the 1991 uprising.<sup>24</sup>

Hussein's government took advantage of the religious divide within Iraq to perpetuate stereotypes of populations he perceived as hostile. The Marsh Arabs were stigmatized and subjected to marginalization as a result of the image perpetuated by the central Iraqi government. The government alleged that the Marsh Arabs sided with Iranian in the eight-year war, which served as the rationale for Hussein's decision to drain the land in order to "flush out rebels hiding among the reed stalks."<sup>25</sup> Essentially, he justified the destruction of the March Lands by alleging that the Marsh Arabs had misbehaved and needed to be punished.<sup>26</sup> Until today, some Iraqis do not believe that the Marsh Arabs are even Iraqis because of how Hussein's government alleged their allegiance to Iran. The effects of this image reached far beyond the wetlands where they

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<sup>23</sup> Ibid p.15

<sup>24</sup> Ibid p.16

<sup>25</sup> Rania El Gamal, "FEATURE-Iraqi tribal disputes pose new challenge to oil firms. *Reuters*, May 29, 2011, accessed 30 Oct, 2017, <http://www.reuters.com/article/iraq-oil-tribes/feature-iraqi-tribal-disputes-pose-new-challenge-to-oil-firms-idUSLDE74P0GZ20110529?irpc=932>

<sup>26</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>

lived. When their lands were drained and the Marsh Arabs had to migrate to other Iraqi cities, they were not very welcomed.

## **1.6 Circumstances of the Marsh Arabs Immediately before and during the 1991 Uprising**

For more than two decades, the Iraqi Shia, who collectively formed at least 60% of the country's population, were subjected to several types of persecution.<sup>27</sup> It was reported that the authorities implemented such tactics to contain the Shia, as the government feared that they might follow the example of Shia in Iran and revolt.<sup>28</sup> The Marsh Arabs suffered from different forms of exploitation, which was not only linked to their religion. In addition to their Shi'a faith, the Marsh Arabs themselves took part in rebellion against the Baghdad government.<sup>29</sup>

The Arab Marsh dwellers lived in hard circumstances; people suffered from lack of basic public services including access to clean water, sewage system, electricity, and health care. The government claimed that it was difficult to provide public services in such an isolated area. As a result, the Marsh Arabs tried to develop their own ad-hoc local services. For example, they established their own schools; however, their self-dependent services were insufficient. For instance, they approached the Basra governance to gain access to schools. Their health conditions deteriorated,<sup>30</sup> partially due to the unrepaired sewage system, which caused the spread of disease through drinking water.<sup>31</sup>

In addition to being overlooked by the government when it came to basic services, the Marsh Arabs also suffered significantly during the wars which raged throughout Hussein's first decade

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<sup>27</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

<sup>28</sup> Ibid

<sup>29</sup> Ibid

<sup>30</sup> Ronen Zeidel, "Implications of the Iran-Iraq War." *E-International Relations*, October 27, 2013, accessed July 03, 2017. <http://www.e-ir.info/2013/10/07/implications-of-the-iran-iraq-war/>.

<sup>31</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

in power. A socioeconomic survey conducted in 2007 by the United Nations Environmental Program in cooperation with Dhi Qar University assessed specific negative effects that the marshland villages faced early in Hussein's regime. More than half of the villages surveyed experienced negative effects caused by international conflict, including destruction, bombing, and burning. 82% of the villages experienced displacement, 37% experienced destruction, and 12% were bombed. Overall, more than a third of the marshland villages were affected by multiple negative effects.<sup>32</sup>

During Hussein's regime, it was almost impossible for academics to gain access to the marshes. Researchers who spent some time in the marshes described how difficult it was to reach it.<sup>33</sup> The few researchers who were able to reach the marshes did not get adequate information and feedback from locals. This was largely due to the climate of fear created by Hussein's regime, prompting many locals to self-censor rather than speak out. Simply put, people were too scared to accurately describe their situation, fearing punishment by the government if they did. Further compounding the lack of information was how conservative the Iraqi government was about publishing any data regarding the marshes. For example, there was no accurate population census for the marshes.<sup>34</sup> After a few researchers accessed the marshland, they shed light on some demographic information, but the government did not publish anything official. This lack of information and access made it easier for Hussein's regime to act against the Marsh Arabs, as there was little international objection to his policies. For instance, until today, the number of people killed or disappeared after the 1991 uprising, remains known only to the inhabitants of

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<sup>32</sup> Aoki, Chizuru, Ali Al-Lambi, and Sivapragasam Kugaprasatham, "Environmental management of the Iraqi marshlands in the post-conflict period." *Peace building and Natural Resource Management*. Environmental Law Institute and United Nations Environment Programme, (United States, October 2014), p. 119.

<sup>33</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>34</sup> Ibid

themselves.<sup>35</sup> The result was that alas, the marshlands received little humanitarian support during the 1990s.

The aforementioned prejudicial policies and hardship circumstances paved the road for the 1991 uprising to take place. In March 1991, different ethnic groups revolted against Hussein's oppressive regime, particularly the Kurds in the North and the Shia in the South. The Shia uprising started in the Shia holy cities Najaf and Karbala, and the Marsh Arabs played a critical role in this uprising. In addition to taking part in the uprising, Shia opposition leaders fled to the remote marsh terrain to find a safe haven, which placed inhabitants at great risk.

A Human Rights Watch report stated that the Iraqi government responded to the 1991 uprising in the most brutal ways, with entire villages demolished and unarmed civilians punished on suspicion of aiding the rebels. It explains that in the remote marshes along the southern border with Iran, thousands of Shias who fled during the uprising lacked adequate food, hygiene and medical care and were at risk of Iraqi military operations in the area.<sup>36</sup> The displaced Marsh Arabs recall horror stories about the cruelty of the Hussein's regime in containing the uprising, thousands were tortured and even executed in front of their families.<sup>37</sup>

The land that contained this vast amount of natural resources, in addition to its rich culture and valuable historical significance, was largely ignored and brutally drained. Many scholars believe that Hussein was a war criminal because of his brutal repression of the Marsh Arabs.<sup>38</sup> This thesis accepts that Hussein, through very accurate and calculated steps, managed to bring about environmental destruction to the land that sustained the Marsh Arabs to the detriment of their

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<sup>35</sup> Human Rights Watch, *Endless Torment: The 1991 Uprising in Iraq and Its Aftermath* by Eric Goldstein, (HRW. 1991), <https://www.hrw.org/reports/1992/Iraq926.htm>.

<sup>36</sup> Ibid

<sup>37</sup> Ibid

<sup>38</sup> Ibid

culture, because he essentially isolated the community and curtailed its ability to have a political or economic existence. Hussein mainly did this through implementing a development project, after first setting the stage for this project by tying the March Arabs to Iran. The details of the alleged development projects will be expanded in the following section.

### **1.7 Hussein's Development Project**

In 1992, Hussein's administration decided to undertake a so-called development project, even though the central Iraqi government's interest in draining the marshlands dates back to the 1950s.<sup>39</sup> Although government planners had devised schemes to drain the marshlands for economic purposes for decades, systematic drainage efforts began only after an abortive uprising against the government in 1991.

At the dawn of the new millennium, the tragic loss of the Mesopotamian marshlands stands out as one of the world's greatest environmental disasters. Dams and drainage schemes have transformed one of the finest wetlands, the fabled Eden of the Fertile Crescent that has inspired humanity for millennia, into salted crusted desert. The ecological life-support system of a distinct indigenous people(s) dwelling in a rare water-world of dense reed beds and teeming wildlife has collapsed. Humanity's impact on the planet's fragile ecosystems could not be more dramatically illustrated. This Mesopotamian story is yet another wake-up call alerting us to the fraying fabric of spaceship earth.<sup>40</sup>

This project was an intentional environmental, social, cultural disaster. The Iraqi government officially inaugurated the Saddam River in December 1992. The project diverted the Euphrates

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<sup>39</sup> Ibid

<sup>40</sup> United Nations Environmental Program. *The Mesopotamian Marshlands: Demise of an Ecosystem* by Hassan Patrow, (Switzerland: UNEP/DEWA/GRID), <http://www.grid.unep.ch/activities/sustainable/tigris/mesopotamia.pdf>.

River, which had previously flowed entirely into the southern half of the marsh region, into a newly built canal, which the regime called the Mother of all Battles River. Higher up the Euphrates, billions of gallons of water were redirected into a depression in the desert.<sup>41</sup> For nine straight months, around the clock shifts of engineers from the private and public companies were able to achieve Hussein's project. This project caused the drought of an area nearly the size of the Aral Sea or similar to the size of the deforestation of the Amazon forests.

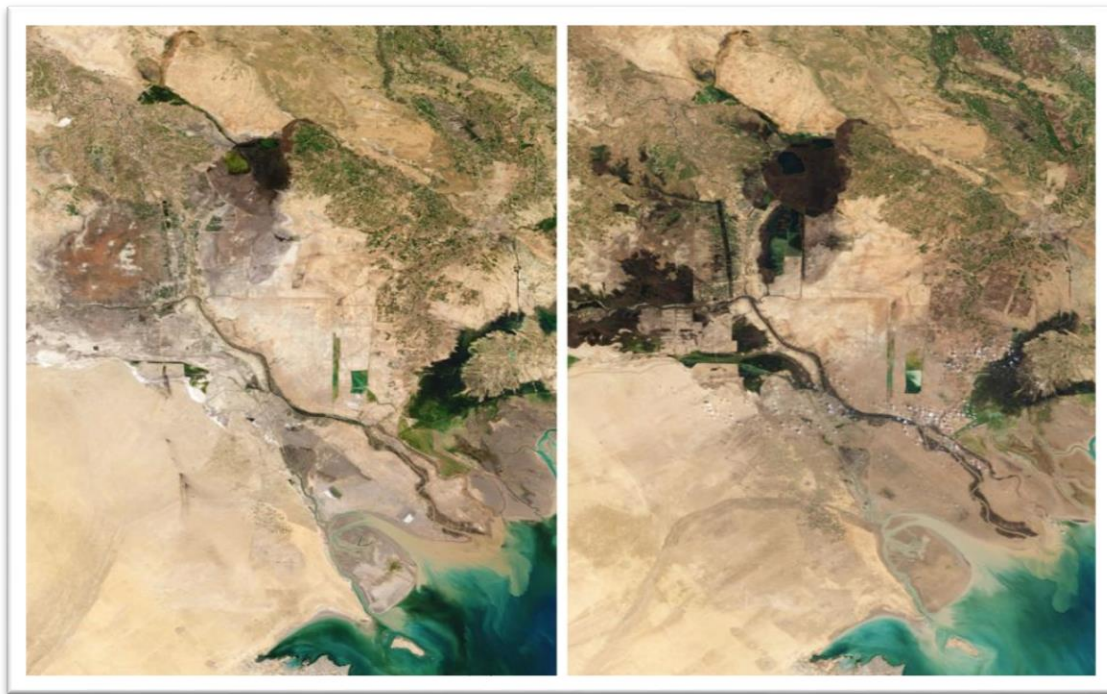


Figure 2: Satellite images shows the marshes in February 2002, when they were nearly dry, and in February 2007, after several years of recovery<sup>42</sup>

When describing the impact that this project had on the culture and highlighting its inherent risks, Joseph Dellapenna, Professor at the Villanova University Law School said:

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<sup>41</sup> Aoki, Chizuru, Ali Al-Lambi, and Sivapragasam Kugaprasatham, "Environmental management of the Iraqi marshlands in the post-conflict period." *Peace building and Natural Resource Management*. Environmental Law Institute and United Nations Environment Programme, (United States, October 2014).

<sup>42</sup> Peter Schwartzstein, "Iraq's Marsh Arabs test the waters as wetlands ruined by Saddam are reborn, *The Guardian*, January 18, 2017, accessed September 26, 2017. <https://www.theguardian.com/global->

That culture was of course built around water and around life in the marshes and that culture has been destroyed and, I would argue, deliberately and purposefully destroyed, precisely because they were people hard to control and a people who had risen in revolt.<sup>43</sup>

As result of draining the marshlands, massive numbers of indigenous individuals either migrated internally or sought refuge in Iran and the US. Between 200,000 and 400,000 individuals were displaced, while nearly 100,000 remained in their land.<sup>44</sup> It also put the culture of the Marsh Arabs at great risk, as it was not feasible for the internally displaced individuals to reveal their identities due to the damaging image spread by the Hussein's administration, an issue that will be discussed in detail in the upcoming chapters on the hurdles to sustaining the culture.

The situation in the marshes kept on deteriorating. By 1993, the Middle East Watch Mission published a report that stated that more than two thirds of the marshes had been entirely drained. The report explained that if the damage is not be contained by the summer, the situation will get worse and indeed, it did.<sup>45</sup>

The United Nations Rapporteur on Human Rights published a report in 1995 explaining that the ecological situation had reflected on the economic status. The report observed that some marsh villagers had resorted to begging on the street to make money.

The lack of water was accompanied by a quick decline in the health conditions of the Marsh Arabs. Cholera broke out, leading to hundreds of deaths. The worsening conditions led to internal and external migration. The marshes were not accessible as Hussein blocked the main

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development/2017/jan/18/iraq-marsh-arabs-test-the-waters-wetlands-ruined-by-saddam-reborn-southern-marshes.

<sup>43</sup> United States Institute of Peace, "The Marsh Arabs of Iraq: Hussein's Lesser Known Victims," Last modified: December 01, 2016. <https://www.usip.org/press/2002/11/marsh-arabs-iraq-husseins-lesser-known-victims>.

<sup>44</sup>United Nations Environmental Program. *The Mesopotamian Marshlands: Demise of an Ecosystem* by Hassan Patrow, (Switzerland: UNEP/DEWA/GRID). <http://www.grid.unep.ch/activities/sustainable/tigris/mesopotamia.pdf>.

<sup>45</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

roads leading to them and so, humanitarian aid was kept out until 2001. There was a sliver of hope in the late 1990s when the marshes had rainfall. It filled some the ponds but it was not enough to sustain agriculture or fishing.<sup>46</sup> It is evident that the development project had a severe negative effect that lasted for many years after its implementation, with impacts on the ecological, social and economic frameworks of the marshes. The next section explores the second turning point the marshes witnessed, the US-led restoration program.

## **1.8 The US Restoration Program**

This thesis will focus on two elements to assess the level of disturbance which occurred to the environment of the Marsh Arabs. The first element is the Hussein administration's development project. The second element, and the focus of this section, is the US restoration programs. The marshlands caught the attention of many countries, including Canada, Italy, and the US after the US-led invasion of Iraq in 2003. At this time, the American government decided to restore the marshlands, which were 7% of their original size. The restoration programs of the marshlands began the same year of the invasion, 2003.<sup>47</sup>

The US government explained that the war on Iraq was an act of "primitive self-defense" because the Iraqi government possessed weapons of mass destruction which constituted a significant threat to the region and to US allies.<sup>48</sup> Furthermore, In an attempt to make the invasion acceptable by the Iraqi population, they claimed their intention to spread democracy across Iraq,

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<sup>46</sup> Ibid

<sup>47</sup> DAI: International Development, *Iraq-Marshlands Restoration Project (IMRP)*, (Accessed June 25, 2017), <https://www.dai.com/our-work/projects/iraq-marshlands-restoration-project-imrp>.

<sup>48</sup> Nafeez Ahmed, "Iraqi Invasion was about Oil." *The Guardian*, 20 March, 2014, <https://www.theguardian.com/environment/earth-insight/2014/mar/20/iraq-war-oil-resources-energy-peak-scarcity-economy>.



which they characterized as the removal of Hussein and his government. The US used the exploitation policies of the Baath regime as a platform for their purported spread of democracy.<sup>49</sup>

In the case of the Marsh Arabs, the US army began by destroying the dams the Iraqi government built during the development project. As a result the water started to reflood and some of the migrated Marsh Arabs returned to the marshes.

In 2003, the US government started its exploration trips into the marshes and discovered the region's rich natural resources, which motivated them to set the framework for a restoration program. Indeed, in that same year, they set in motion the restoration initiative. It is claimed that the US focus on this area was due to the existence of the largest oil reserve in Iraq, the Majnun field, which is estimated to contain 10 to 30 billion barrels. The second largest (and perhaps equally sized) is West Qurna, with reserves of 15 billion barrels.<sup>50</sup> Both are located in the marshlands, meaning that the land floats on a sea of oil.

USAID, together with its contractor, Development Alternatives Inc., headed to Basra to design an action plan for the restoration. The program consulted the following: Iraq's Ministries of Water Resources, Agriculture, and Environment; local officials from the governorates of Maysan, Nasiriyah, and Basra; the University of Basra College of Agriculture and Marine Science Center; representatives of the Iraq Foundation, and the Assisting Marsh Arab Refugees (AMAR) International Charitable Foundation. Advisors to the program came from Iraq, US, UK, Jordan, Australia, Japan, Canada, the Czech Republic, and Italy. Meanwhile, the Iraqi government created the Center for Restoration of Iraqi Marshes and Wetlands (CRIM), which assisted the program. The US remained the main stakeholder, despite the interest of

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<sup>49</sup> "Oil in Iraq." Global Policy Forum, <https://www.globalpolicy.org/political-issues-in-iraq/oil-in-iraq.html>.

<sup>50</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

international and national partners in the program, and by 2004 the program was able to restore more than 40% of the affected lands.<sup>51</sup> The USAID program in Iraq was the largest, as well as the most complex, wetlands restoration program undertaken by the US government.<sup>52</sup>

Washington initially committed \$5-10 million, but by 2005 the bill reached \$50 million, solely directed to implementation of the restoration programs.<sup>53</sup>

This thesis analyzes the efficacy of this restoration program, while specifically focusing on the relationship between the ecological restoration of the wetlands and the restoration of the Marsh Arabs' culture. As mentioned above, the indigenous people have a very strong relationship with their lands. However, when the fertile land was destroyed and became arid, the inhabitants were forcibly displaced and very few inhabitants tried to sustain their lives in these conditions between 1991 and 2003.

Thus, the pertinent question is if the land is restored, will the culture be restored too? To answer this question, the following markers for measuring cultural restoration:

- a) The economic activities, daily tasks and routines of the Marsh Arabs; and
- b) The transmission of traditional ecological knowledge to younger generations.

Chapter 2 assesses different scholars' main approaches in tackling the issue of the Marsh Arabs.

Chapter 3 explains the research methods undertaken to answer the proposed question.

Meanwhile, Chapter 4 sheds light on the ecological and cultural conditions before and after the 1991 development project, and how Hussein's development project affected the ecological and

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<sup>51</sup> Ibid

<sup>52</sup> Cultural Survival, *Wetlands Restoration Brings Iraq's Marsh Arabs Home*, 2004, <https://www.culturalsurvival.org/news/steve-grove/wetlands-restoration-brings-iraq-s-marsh-arabs-home>.

<sup>53</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting the Marsh Dwellers and Restoring The Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003), [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

the cultural circumstances of the wetlands. Chapter 5 discusses the effect of the US-led restoration program on the land and the culture of the Marsh Arabs. Finally, Chapter 6 highlights the answer to the research question.

## **Chapter Two**

### **Literature Review**

This section will present the previous literature and academic contributions related to the research question. The literature review in this dissertation will discuss the following areas of research:

- The main ideas and literature written on the community of the Marsh Arabs and its significance to the thesis
- The main themes of culture
- The concept of cultural change
- The concept of cultural loss
- The concept of restoration

I structure the literature review with a number of factors in mind. First, I focus on the previous contributions of legal and ecological scholars, knowing that these fields have received the most attention. The legal perspective of the Marsh Arabs' ordeal focused on the deliberateness of the act and enhanced the significant shock and disturbance as a result of the development project.

Tackling the ecological perspective establishes the significant relationship between the Marsh Arabs and their environment, which played an essential role in the formation of culture.

Second, this thesis mainly analyzes the effect of the restoration and the development projects on the Marsh Arabs' culture. This objective cannot be achieved without discussing the different themes of culture, in other words, the main components of culture. The next section defines and explains the meaning of cultural loss and differentiates between it and the concept of cultural change. By explaining these ideas, this thesis engages with the background research.

## **2.1 Who are the Marsh Arabs: Overview on the Ecological and Cultural Situation of the Marsh Arabs**

As with many ethnic minority groups in Iraq, the Marsh Arabs suffered from Hussein's unfair sectarian policy. They were highly marginalized and, like the majority of the Shia population, had a minimal political representation.

It is quite apparent that the marshes suffered from brutal policies prompted by an alleged association between the inhabitant of the marshes and Iran. The Iraqi government obscured the marshes from international attention, and very few scholars and researches reached the marshes. The little information available predated the 1991 uprising, because afterwards accessing the marshes was an impossible task for outsiders.<sup>54</sup>

Most of the researchers who reached the marshes gave an overview on the region's history, which dates back to the fifth millennium B.C, making it the earliest known human habitation in the Euphrates delta. Within very limited academic contribution, scholars and researchers alike tackled the issue of the Marsh Arabs from different angles. The scholarship covers majored turning points, namely the 1991 uprising, Hussein's development project and the US restoration project. After the 1991 uprising and the subsequent development project, researchers focus on two specific aspects of the Marsh Arabs' lives: the legal and the ecological.

### *2.1.1 Legal discourse*

Hussein's development project in the lands of the Marsh Arabs was a subject to condemnation from a number of legal scholars. Joseph Dellapenna and Michael J. Kelly argued that Hussein has committed major human rights violations by his policies that have greatly -and deliberately-

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<sup>54</sup> Inter displacement Center and Norwegian Refugee Council, *IRAQ: Little new displacement but around 2.8 million Iraqis remain internally displaced, A profile of the internal displacement situation* (Norwegian Refugee Council. 2004.) <http://www.internal-displacement.org/assets/library/Middle-East/Iraq/pdf/Iraq-March-2010.pdf>.

harmed the Marsh Arabs. <sup>55</sup>Kelly was one of the first to accuse Hussein of committing what could amount to an environmental genocide against the Marsh Arabs and their lands. Dellapenna explained that Hussein is "very likely" guilty of genocide against the Marsh Arabs<sup>56</sup>. He said that "the largest of the three marshes holds canals and engineering structures that serve no purpose other than to drain the marsh suggests that they were not built for any legitimate agricultural or developmental purpose."<sup>57</sup>

The arguments proposed by the aforementioned scholars are supported by environmental researchers', claiming that Hussein's actions amounted to an environmental genocide, the first instance of terming environmental destruction as genocide.

The research question that this thesis is trying to answer does not directly engage with the legality of Hussein's development project. However, it discusses the discourse around Iraq's violation of its international obligations to underscore that the development project and subsequent environmental destruction was not incidental or inevitable. The development project didn't begin in earnest until after the Marsh Arabs participated in a rebellion against Saddam Hussein, immediately after the Persian Gulf War. Hence it was seen as a form of punishment to Arab dwellers for taking part in the uprising.

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<sup>55</sup> Aron Schwabsh, "Ecocide and Genocide in Iraq: International Law, the Marsh Arabs, and Environmental Damage in Non-International Conflicts." *Colorado Journal of International Environmental Law & Policy* Vol. 27 forthcoming, TJSI Public Law Research Paper No. 03-08 (2003), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=442541](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=442541).

<sup>56</sup> "The Marsh Arabs of Iraq: Hussein's Lesser Known Victims," United States Institute of Peace, last modified: November 25, 2002, <https://www.usip.org/press/2002/11/marsh-arabs-iraq-husseins-lesser-known-victims>.

<sup>57</sup> Katherine M. Kelly, "Declaring War on the Environment: The Failure of International Environmental Treaties During the Persian Gulf War," *American University International Law Review* Vol 7, issue no. 4 (1992): 921-950, <http://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1533&context=auilr>.

### 2.1.2. *Ecological discourse*

The second predominant area of research focused on the area's ecology, observing the different phases undergone by the Marsh Arabs. Sam Kubba, Wilfred Thesiger and Iraqi anthropologist S. M. Salim were among the few researchers who visited the marshes and documented major social and anthropological occurrences. In fact, Sam Kubba predicted the radical negative effect the development project might have on the environment. At the time, most researchers and scholars heavily focused on analyzing the ecological situation in the wetlands. Growing recognition of the project's ecological impact motivated the push for legal condemnation.

However, researches mostly overlooked the project's social impacts on the Marsh Arabs. In other words, their research focused on the ecological ramifications without providing deeper analysis on how it affected the community. In the specific case of the Marsh Arabs, an indigenous people, the implementation of the development project on their land did gather some attention. Scholars were often divided between two schools of thought.

The first school supported the development project's implementation. Scholars from this school explained that it would be irrational not to implement such projects just because the indigenous people existed on the land first.<sup>58</sup> This argument drew on the inconsistencies surrounding the definition of indigenous people.<sup>59</sup> The former Iraqi government embraced this argument, claiming that the Marsh Arabs were not indigenous to Iraq. Along the same lines, the government circulated images that the Marsh Arabs were not loyal, which meant their plight

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<sup>58</sup> I. C. Jarvie, "Culture. The anthropologist's account. Adam Kuper," *Philosophy of Science*, 67 (3). Sep 2000: p 540-6, <https://doi.org/10.1086/392798>.

<sup>59</sup> André Béteille, "The Idea of Indigenous People," *Current Anthropology*, 39, no. 2, April 1998, 187-192. <https://doi.org/10.1086/204717>.

gained little support from the rest of the Iraqi people. Subsequently, when the development project began, there was no resistance from within Iraq.<sup>60</sup>

The second school of thought highly condemned implementing development projects on the lands of indigenous people.<sup>61</sup> Scholars supported the rights of indigenous people in keeping their lands and maintaining their lifestyle, even if the proposed development project will benefit other communities.<sup>62</sup> They also believed that the indigenous people, the Marsh Arabs in this case, were treated inhumanely during the implementation of such projects, and in many cases, were not offered suitable alternatives. In addition, entities carrying out projects like the one in question usually do not consider the importance of informing the communities and community discussions. If communication is ignored, the indigenous people may be left homeless, and their culture exposed to potential erosion.<sup>63</sup>

Researchers from the latter school explained that indigenous people are continuously marginalized, economically exploited and politically disempowered due to their social and cultural differences from the dominant ethnic group.<sup>64</sup> Their subjugation is usually accompanied by denials of the rights enjoyed by the rest of the population. Today, the exploitation of their lands and their culture is increasingly common, especially if it conflicts with the interests of the dominant group.<sup>65</sup> This evidently manifests in the case of the Marsh Arabs, who were politically

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<sup>60</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

<sup>61</sup> Open Society Foundation, *Strategic litigation impacts: indigenous peoples' land rights*, (Open Society Foundations Publications), <https://www.opensocietyfoundations.org/sites/default/files/slip-land-rights-20170424.pdf>.

<sup>62</sup> I. C. Jarvie, "Culture. The anthropologist's account. Adam Kuper," *Philosophy of Science*, 67 (3). Sep 2000: p 540-6, <https://doi.org/10.1086/392798>.

<sup>63</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

<sup>64</sup> Robyn Eversole, John Andrew Mc Neish and Albert D Cimadamore, eds. "Overview patterns of indigenous disadvantage worldwide: Indigenous peoples and poverty: an international perspective, ed. Robert Eversole, (Zed Book, London), <http://www.crop.org/viewfile.aspx?id=98>.

<sup>65</sup> Ibid



and socially marginalized, and economically exploited. On the ecological level, the development project diverted the wetland's water, over the objection of researchers' opinions and advice. It was thus a clear case of exploitation.

The 1991 project's legal and ecological impacts are recurring themes revisited throughout this thesis. The legal and the ecological research evidence how the late Iraqi president deliberately drained the land, reflecting his motive for destroying the Marsh Arabs' homes and eliminating their culture. His development project was a form of revenge or punishment for the Marsh Arabs' 1991 uprising. On the basis of these established facts, this thesis assesses if the culture of the Marsh Arabs was lost, and to answer the research question, analyzes the effect of ecological restoration on the culture of the Marsh Arabs.

## **2.2 The Main Themes of Culture**

As scholars and researchers suggest, there is a harmonious connection between indigenous peoples and their inhabitant, and in this case the wetlands have been decisive in forming the Marsh Arabs' culture. In the next section, I will explore the notion of cultural formation, the applicability of existing theories to the Marsh Arabs' context, and the limitations of available frameworks. Broadly speaking, there appears to be two main definitions of culture: culture as an adaptive system and culture as an ideational system.

### *2.2.1 Cultures as ideational systems:*

One of the most common approaches for analyzing culture is the cognitive approach or the ideational system of culture. This approach holds that a society's culture consists of ideas and beliefs that guide members toward behaving and operating in certain ways, which are acceptable to other members. It claims that culture is not a material phenomenon, meaning that it does not

consist of objects, people, behavior, or emotions. The organization of these things, rather than their existence itself manifests culture.<sup>66</sup> It is the concepts and the ideas people have in mind, their ways of perceiving and interpreting. Within this approach, Levi- Strauss focuses on the process by which these ideas, beliefs and concepts are formed.<sup>67</sup> In particular, he expresses views on the symbolic world in which and beliefs are generated. He views culture as symbolic systems, consisting of cumulative creations of the mind. Additionally, it is believed that the physical world provides the raw material for the formation of different cultural domains.<sup>68</sup> Similarly, Geertz contributes toward an understanding of culture in his book, entitled *Interpretation of Culture*. He defines culture as the “system of inherited conceptions expressed in symbolic forms by mean of which men communicate, perpetuate and develop knowledge and attitude towards life.”<sup>69</sup>

The ideational approach’s limitations in this case are readily apparent in its emphasis on the social, as opposed to the natural. It focuses more on ideas, symbols, and mental structures as driving forces in shaping human behavior, and the scope of this research does not evaluate the intangible elements of culture (ideas and symbols). The interplay between the marsh environment and Marsh Arab culture could not be addressed within this framework.

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<sup>66</sup> Wolfgang Fikentscher, “Chapter 05,” in *Theories of culture and cultures* (Munich Law and Anthropology - Outlines, Issues, Suggestions, 2008). [http://works.bepress.com/wolfgang\\_fikentscher/5/](http://works.bepress.com/wolfgang_fikentscher/5/).

<sup>67</sup> Ibid

<sup>68</sup> Roger M Keesing, “Theories of Culture,” *Annual Review of Anthropology* Vol. 3 (1974), 73-97, <https://is.muni.cz/el/1423/jaro2007/SAN206/um/Keesing-Theories-Culture-ARA-1974.pdf>.

<sup>69</sup> Clifford Geertz, *The Interpretation of Cultures: Selected Essays*, (New York: Basic Books, Inc., Publishers, 1973), [https://monoskop.org/images/5/54/Geertz\\_Clifford\\_The\\_Interpretation\\_of\\_Cultures\\_Selected\\_Essays.pdf](https://monoskop.org/images/5/54/Geertz_Clifford_The_Interpretation_of_Cultures_Selected_Essays.pdf).

### 2.2.2. Culture as adaptive system

Culture as an adaptive system is a central theme in cultural studies. The theory holds that the main pillars of culture are the result of the interaction between the ecological system and the inhabitants of a particular area. Here, the main focus is on human social life and its relationship to the surrounding ecological framework. Thus, this approach argues that the constant changes occurring within an ecological habitat are determinant factors in the evolution of certain aspects of culture. Accordingly, it does not view culture as something genetic. On the contrary, it pushes forward the notion that culture is acquired and developed.<sup>70</sup>

Furthermore, proponents of this theory view culture as a system of socially transmitted behavioral patterns, which demonstrate the connection between the ecological surrounding and the communities, including technologies and modes of economic organization. It also identifies internal organization of social grouping and political organizations, as well as religious beliefs and practices.<sup>71</sup> Through this approach, cultural change is understood primarily as a process of adaptation, which amounts to natural selection. In *Man and Culture in a Counterfeit*, Betty J Meggers states

Man is an animal and like all other animals, must maintain an adaptive relationship with his surrounding in order to survive. Although he achieves this adaptation principally through the medium of culture, the process is guided by the same rules of natural selection that govern biological adaptation.<sup>72</sup>

Thus, the relationship between the inhabitants and the environment is well established, and cultural change is determined through changes that occur in the ecological setting.

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<sup>70</sup> Ibid

<sup>71</sup> Ibid

<sup>72</sup> Donald W. Lathrap, "Reviewed Work: Amazonia: Man, and Culture in a Counterfeit Paradise by Betty J. Meggers," *American Anthropologist*, Vol. 75, No. 4 (Aug., 1973), p. 988, <http://www.jstor.org/stable/673137>.

Cultures change in order to reach equilibrium within their existing ecosystem. However, when the changes taking place in the ecosystem are drastic, it eventually compels culture into radical adjustments. Feedback mechanism in cultural systems may thus operate both positively, towards self-correction and equilibrium, or negatively, towards disequilibrium and directional change. The outcome largely depends on the nature of the change that occurs to the ecosystem.<sup>73</sup> Within the process of cultural change, it is important to point out that the different aspects of culture undergo this change as well, because they are interrelated.<sup>74</sup>

The theory of cultural materialism falls under the umbrella of the adaption approach. This theory proposes that the elements of a certain area are key factors in forming culture. Cultural materialism is derived from two English words: culture, which refers to (among others) social structure, language, law, religion, politics, art, science, and the word materialism, which refers to materiality, coming from matter, rather than intellect or spirituality.

Harris develops cultural materialism by borrowing from existing anthropological doctrines, especially Marxist Materialism. The main components of this theory are:

- a) Infrastructure: population, basic biological need, and resources, such as labor, equipment, technology
- b) Structure: pattern of organization which is determined by government, education, production regulation, etc.
- c) Superstructure: social institutions which include law, religion, politics, art, science, superstition, values, emotions, and traditions<sup>75</sup>

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<sup>73</sup> Ibid

<sup>74</sup> Ibid

<sup>75</sup> Ibid

Cultural materialism is one of the major anthropological perspectives for analyzing human societies. It contends that the physical world impacts and sets constraints on human behavior, which subsequently act as a mirror to the culture. Materialists believe that human behavior is part of nature and therefore, it can be understood through the same approach as used in natural science. Materialists give priority to the material world over the world of the mind when they explain human societies.<sup>76</sup>

Culture materialism actually links the different layers of the complex notion of culture by analyzing the elementary state of societies. It connects the tangible elements of culture and the intangible elements of culture by explaining that their original formation is the materialistic, or those tangible elements that can be represented in the ecological setting of a given community. This approach serves well the case of the Marsh Arabs, as their culture witnessed radical damage due to a man-made destruction of the ecological system. Hence, exploring the relationship between the land and the people and cultural formation are vital in this thesis and act a theoretical framework for the analysis.

To conclude, there are different and interrelated perspectives and explanations of culture highlighted throughout this section. It is impossible to understand the above-mentioned explanations in isolation, because culture exists within sociocultural systems. A sociocultural system constitutes the bridge between the adaptation realm and the ideational realm. Ideation advocates are very much concerned with exploring the process of the formation of beliefs and ideas, as well as the formation of knowledge, but adaption better addresses the relationship between culture and ecology.

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<sup>76</sup> Frank Elwell and Brian Andrews, "Cultural Materialism," *Oxford Bibliographies*, last modified: 28 December 2016, <http://www.oxfordbibliographies.com/view/document/obo-9780199766567/obo-9780199766567-0154.xml>.

For the purpose of this research, the adaptation approach better explains the formation and the development of culture. This particular approach mainly focuses on the human interaction with the land or the surrounding environment.<sup>77</sup> It is within this context that the Marsh Arabs used and managed the surrounding environment in the most efficient ways. Thus, these methods of management are interpreted as cultural behaviors. To clarify, the Marsh Arabs adapted and shaped the green areas and the wetlands they had to develop professions like farming and fishing and formed a unique economic framework. In addition, the ecological setting impacted the social framework. For instance, after the long working day the Marsh Arabs gathered at the Muhdhif guest houses for social gatherings. The specialized construction of the Muhdhif houses with reeds, and its specific social function were hallmarks of Marsh Arab culture. Therefore, their cultural framework responded to the material parameters of life: food, shelter, and reproduction. Second, the area of research for this thesis analyzes the effect of the restoration and development programs on the ecological setting of the marshes and how it affected the existing culture. Hence, understanding the relationship between the inhabitants and the land is the main area of concern, which falls within the framework of the adaptation approach. The next section will look at literature on the issue of cultural change, since this thesis examines the impact of Hussein's development project on the culture of the Marsh Arabs.

### **2.3 Cultural Change**

Having established a conceptual framework with which to analyze manifestations of the Marsh Arab culture, I outline the relevant literature on cultural change. This will allow me to analyze the impact of Hussein's development project on the existing culture.

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<sup>77</sup> Ibid

Previous literature illustrates the extent of the Marsh Arabs' suffering before and, especially after, Hussein undertook the development project in the wetlands. Nevertheless, scholars have paid almost no attention to the effects of the destruction of the habitat on the culture of the Marsh Arabs. By using the existing literature on cultural change as an analytical framework, I intend to partially fill this gap in the discourse.

Approaching cultural change is complicated by the availability of numerous different methodologies. For instance, early contribution on the issue of cultural change was primarily tackled by evolutionists. The theory of evolution sought to explain that culture evolves from the very simple beginnings into more complex schemes.<sup>78</sup> According to this theory, societies could be ranked hierarchically on a single scale, from the savage to the civilized, with the people at the bottom being less intelligent than those at the top.

The evolutionists had a relatively narrow explanation to the theory of cultural change. For instance, they did not pay adequate attention to the individualized circumstances of each society, and how that contributes to cultural changes. Examples of these undiscussed factors include political events, historical developments or ecological disruptions.

In an attempt to tackle the shortcomings of evolutionism, scholars moved to deeper analysis of cultural change and identified different factors which cause this change. These factors can be internal or external. For instance, cultural change can result from cultural diffusion, which is a spread of cultural beliefs and social activities from one group to another. The mixing of world cultures and different ethnicities, religions, and nationalities has increased with advanced communication, transportation and technology, migration, trade, or occupation. Hence, there are

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<sup>78</sup> Heather Long and Kelly Chakov, "Department of Anthropology University of Alabama," *Social Evolutionism*, <http://anthropology.ua.edu/cultures/cultures.php?culture=Social%20Evolutionism>.

different forms of cultural diffusion: technological cultural diffusion, economic cultural diffusion, or religious cultural diffusion.<sup>79</sup>

Another element that can cause cultural change is economic disruption, whether on the internal, regional, or international level or whether economic development or deterioration. Economic development is represented by industrialization, and modernization theorists claim that the rise of the industrial society is linked with coherent cultural shifts away from traditional value systems. They also link the postindustrial society with a shift away from absolute norms and values, toward a state of increasingly rational, tolerant, trusting postindustrial values.<sup>80</sup> Another major element causing cultural change is environmental, ecological, or climate changes represented in unexpected rainfalls, drought, or earthquakes. This could occur due to man-made change or a natural change, and can actually change the features of the society, and not only cause cultural change but it can also cause cultural loss (which will be discussed in the next section).<sup>81</sup>

In this case, in this case, the notion of cultural ecology is the most appropriate framework or approach to cultural change. Cultural ecology is “the study of the role of culture as a dynamic component of any ecosystem,”<sup>82</sup> meaning that the environment itself is a key factor in cultural change. Julian Steward states that change can be predicted according to the ecological and environmental settings and circumstances to the extent that it can be foreseen how a “society will

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<sup>79</sup> “Encyclopedia Britannica,” Cultural diffusion, accessed November 04, 2017, <https://www.britannica.com/topic/cultural-diffusion>.

<sup>80</sup> Ronald Inglehart and Wayne E. Baker, “Modernization, Cultural Change, and the Persistence of Traditional Values,” *American Sociological Review*, Vol. 65, No. 1, Looking Forward, Looking Back: Continuity and Change at the Turn of the Millennium (Feb. 2000), pp. 19-51.

<sup>81</sup> Antoinette Mannion, *Global Environmental Change: A Natural and Cultural Environmental History*, (United States of America: Route ledge Taylor and Francise group, 1991), Second edition, <https://goo.gl/EFApoe>.

<sup>82</sup> Julian Haynes Steward, *Theory of Cultural change: The Methodology of Multilinear Evolution* (United States of America: University of Illinois Press, 1971).



change over time as a response to certain environmental conditions.”<sup>83</sup> The unique features of the culture that shaped the community of the Marsh Arabs disintegrated as a result of the deliberate act of diverting water from the wetlands to the western Iraqi desert. The potential for this project to cause harmful change to the Arab Marsh culture was well known but ignored.<sup>84</sup> From this notion of ecological change, I will assess the cultural changes that occurred to the Marsh Arabs’ culture after their environment was radically altered.

## **2.4 Cultural Loss**

There is a distinct difference between cultural change and culture loss, which give rise to a subject of literature. Cultural change is inevitable as culture is a dynamic feature. However, cultural loss entails radical changes in the fabric of the culture. Thus, I deem it necessary to establish an independent framework for the latter.

To begin, cultural loss is defined as adverse impacts on the range of traditional activities, emotional well-being, and/or social relations engaged in by an individual and/or the indigenous community, as the result of changes in the land. Such losses can negatively affect major features in culture.<sup>85</sup> Cultural loss happens as a result of radical change. Extensive loss is more likely when the impetus for cultural change is exterior to the group, when major changes are made, and when the changes occur quickly and radically.<sup>86</sup>

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<sup>83</sup> Ibid

<sup>84</sup> Chizuru Aoki, Ali Al-Lambi, and Sivapragasam Kugaprasatham, *Environmental management of the Iraqi marshlands in the post-conflict period. Environmental management of the Iraqi marshlands in the post-conflict period*, October 2014.

<sup>85</sup> Robin Gregory, William Trousdale, “Compensating aboriginal cultural losses: an alternative approach to assessing environmental damage,” *Journal of Environmental Management*, (28 December 2008), <https://www.cip-icu.ca/Files/Awards/Planning-Excellence/2010-HM-Planning-Publications.aspx>.

<sup>86</sup> “Dictionary of Multicultural Psychology: Issues, Terms, and Concepts.” <http://sk.sagepub.com/reference/dictionary-of-multicultural-psychology/n57.xml>.

Cultural loss can be considered as another, deeper phase of cultural change. The presence and continuity of factors that cause cultural change can eventually cause cultural loss. Hence the factors of cultural loss and cultural change overlap.<sup>87</sup> The more apparent feature of cultural loss is the radicalness of the change.

Radical change is often linked to migration in the sense that it may cause forced migration, which is applicable to the case of Marsh Arabs.<sup>88</sup> Since migration and its relationship to cultural loss is extremely difficult to prove, this thesis examines the impact of ecological changes, instead of migratory movements. Indeed, migration is one of the causes of cultural loss, but it is clear that challenges arise with proving this loss due to the complexity of culture. For example, if one observes migrated communities which still practice their traditions and retain their language, one may prematurely assume these are features of a maintained culture. Yet the same community might disagree with traditional beliefs or forget taboos and carry out certain behaviors that do not align with their previous culture, reflecting major changes. Within this context, diasporas act as a comprehensive example of the difficulty associated with assessing cultural loss for migrated individuals. Diaspora is defined as groups of persons of the same ethno-national origin who themselves, or their ancestors, voluntarily or under coercion migrated from one place to another, or to several other places, settled in these places, and maintained their identity and various kinds of contacts with their place of origin.<sup>89</sup> However, even the term diaspora is highly contested and challenged because scholars have different perspectives on tackling the issue of cultural identity.

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<sup>87</sup> E. O. Wahab, S. O. Odunsi, O. E. Ajiboye, "Causes and Consequences of Rapid Erosion of Cultural Values in a Traditional African Society," *Journal of Anthropology*, Volume 2012 (2012), Article ID 327061, 7 pages, <http://dx.doi.org/10.1155/2012/327061>.

<sup>88</sup> Maryann Bylander, "Depending on the Sky: Environmental Distress, Migration, and Coping in Rural Cambodia," *International Migration* Vol. 53 (5) 2015, <http://onlinelibrary.wiley.com/doi/10.1111/imig.12087/epdf>.

<sup>89</sup> "Diopara," *Encyclopedia Princetoniensis: The Princeton Encyclopedia of self-determination*, <https://pesd.princeton.edu/?q=node/232>.

Therefore, assessing cultural loss due to environmental distress gained more attention from scholars, as it featured tangible elements that could be assessed as features of cultural loss.

In the case of the Marsh Arabs, the development project uprooted the community. It caused forced displacement, and the inhabitants who stayed found very poor ecological circumstances, making their lives unbearable. In the dire ecological circumstances after the development project, the Marsh Arabs' cultural features deformed leading to disappearance of culture. It is this phenomenon the thesis addresses.

To maintain culture and guarantee its continuity, it must be transmitted to younger generations. This includes the passage of knowledge about economic activities, traditions, and beliefs. Otherwise, disappearance, as opposed to cultural change, is a real threat, as was the case with the Marsh Arabs. One study compared between the older generation, defined as above the age of 40, and the younger generation, defined as between 20 to 30. It detected a disconnection from the ecological and traditional knowledge among the younger generation, which was caused by destruction of the ecological setting.<sup>90</sup> The particular issue of cultural loss will be further explored in this thesis. There are several reasons for the disruption of the transmission of TEK, including radical change in the ecological and environmental settings in this case. The late Iraqi president's development project destroyed the ecological setting, suspending their economic activities. It is hypothesized that younger generations did not have the knowledge of major economic activities considered focal elements in the culture of the Marsh Arabs.

The previous literature on cultural loss, whether in the form of a survey or field research, provides me with tools necessary to extract the elements of cultural loss analysis. In other words, it explains

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<sup>90</sup> Kevin Whalen, "Finding the Balance: Student Voices and Cultural Loss at Sherman Institute." *American Behavioral Scientist* Vol 58, Issue 1, pp. 124 – 144, <http://journals.sagepub.com/doi/abs/10.1177/0002764213495026#articleCitationDownloadContainer>.

points that can be extrapolated to assess tangible cultural loss and ways to sustain culture. The realm of cultural loss is not the main focus of this research. However, it sets the platform for analyzing the impossibility of restoring the culture from the broader perspective and for the case of the Marsh Arabs, as I will explore in the next chapters.

## **2.5 Ecological and Culture Restoration:**

After the US invasion of Iraq in 2003, the international community executed an environmental restoration program in the area. However, the ecological regeneration did not alleviate the Marsh Arabs' challenges. This thesis analyzes the possibility of restoring culture through environmental restoration. The available literature underscores the challenges of artificially recreating the environmental setting relied on by indigenous people.

Unfortunately, environmental destruction jeopardizes the sustainable activities indigenous communities have practiced for thousands of years, whether they are land-based or water-based cultures. The indigenous Marsh Arabs had a special place in the anthropological and ecological arenas because they lived in harmony with their environment, on reed islands and in relative isolation along the periphery of the marshes. Despite Hussein's destruction, the 2003 US-led invasion of Iraq brought some hope to the Marsh Arabs, as researchers began seeking modalities for restoring the lost land and culture. However, the ability for ecological restoration projects to simultaneously achieve cultural restoration is a debatable issue.

Roberts explains the central tenants of ecological restoration as:

- 1- The recovery of resilience and adaptive capacity of ecosystems that have been degraded, damaged, or destroyed. Restoration focuses on establishing the structures, patterns, and

ecological processes necessary to make terrestrial and aquatic ecosystems sustainable, resilient, and healthy under current and future conditions.<sup>91</sup>

- 2- Ecological restoration is an ongoing human activity comprised of many conscious and creative acts that seek to create the conditions for habitats to self-organize and evolve according to their own needs, structures and priorities.<sup>92</sup> Hence, restoration is a human activity that assists ecological recovery. Central to the idea of recovery is the idea of a return to a desired ecological status. An ecological trajectory considers both biotic and abiotic factors in an ecosystem and their development over time. Following recovery, ecological management takes over for ecological restoration and recovery continues by shaping the ongoing processes of the restored ecosystem.
- 3- It is essential to note that restoration is a human activity, meaning that humans are the assistants who create the intentional activities that initiate or accelerate recovery. Without human intervention there is no restoration, only the often-leisurely flow of ecological succession. A restored ecosystem therefore becomes a cultural ecosystem, one that is “developed under the joint influences of natural processes and human-imposed organization,” regardless of its pre-restoration state.<sup>93</sup>

Traditionally, academics tackled ecological restoration from different perspectives. One group of scholars’ views ecological restoration from a merely scientific perspective, disregarding the humanitarian, social, cultural, and political aspects. Many restoration projects approach the situation in this way, completely disregarding the sociology of the inhabitant community, despite

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<sup>91</sup> France L Robert, “Place-based performance and ecological restoration, *“Healing Natures, Repairing Relationships* (Truro: Libri Publishing), Accessed June 26, 2017. ProQuest Ebook Central.

<sup>92</sup> Ibid

<sup>93</sup> Ibid

how important these communities are for the overall success of any restoration project. As the historian and ecologist Robert McIntosh points out:

The conflict between the image of science as objective and value-free and that of ecology as intrinsically value-laden and a guide to ethics for humans, animals, and even trees is difficult to reconcile. Segregation of strictly scientific concerns from matters of public policy is not easy.<sup>94</sup>

On the other hand, a significantly different approach focuses on the central impact of restoration projects. This school views nature as more likely to be exposed to deterioration through natural or artificial causes and hence, restoration provides inhabitants a chance or an opportunity to recreate and recover their lives. This approach also stresses the concept of reciprocal restoration, which is mutually reinforces restoration of land and culture such that the repair of ecosystem contributes to cultural revitalization, and the renewal of culture promotes restoration of ecological integrity.<sup>95</sup>

Researchers have also introduced the notion of culture as relevant when discussing “landscape” restoration. Scholars from this school emphasize the importance of expanding the conceptual and methodological scope from natural sciences to humanities, or from strictly bio-ecological issues to more complex human-ecological issues. For this purpose, exclusively scientific paradigms must be replaced with trans-disciplinary concepts and methods, and a more holistic approach established. This discipline views ecological restoration as a complex inter-disciplinary endeavor aimed to connect natural systems and human systems towards sustainability, which is a focal element in the process of ecological restoration.

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<sup>94</sup>Ibid.

<sup>95</sup> France L Robert, “Place-based performance and ecological restoration,” *Healing Natures, Repairing Relationships* (Truro: Libri Publishing), Accessed June 26, 2017. ProQuest Ebook Central.

The above-mentioned section traces the different stages and developments of the concept of ecological restoration. It began with definitions and approaches to ecological restoration, and extrapolates that sustainability and continuity are integral to ecological restoration. Both require the involvement of the inhabitants, which are lacking in scientific models. Researchers in this field have emphasized the importance of including the humanitarian, social, and cultural paradigms in the whole concept of ecological restoration, rather than focusing on physical recovery. However, the contribution fails to evaluate the impact of ecological restoration on the culture of the inhabitant community. It only discusses including culture in the process of achieving ecological restoration, but not the status of culture after actually achieving ecological restoration.

This thesis will provide much needed insight into the state of indigenous cultures after the completion of environmental restoration programs. As previously noted, the Marsh Arabs gained very limited academic attention prior to the development and restoration programs. I have come to discover that previous literature mainly tackled the effect of these programs from the ecological, environmental, and legal perspectives, but largely ignored the cultural aspects. Building upon this well-established environmental analysis, I examine the effect of the two programs on the culture of the community, after establishing a sufficient background on the relationship between culture and land. Using the aforementioned theoretical frameworks related to defining culture, delineating between cultural change and cultural loss, and approaches of ecological restoration, I will assess the success of the US restoration program's efforts. In doing so, I draw conclusions on the immediate challenges of restoring the Marsh Arabs' culture and call into question whether ecological restoration programs are effective in this regard.

## **Chapter Three**

### **Methodology**

In this section, I highlight the indicators used as points of analysis throughout the research, while shedding light on the limitations that this research faced. To assess the changes that occurred to the culture, I chose specific indicators that reflect the relationship between the culture and the ecological setting or the environment of the marshlands. These indicators are as follows.

#### **3.1 Elements of Assessment (indicators)**

Culture is a broad and complex concept, but there are common elements that exist regardless of the approach. Examples of these elements are tasks, activities, jobs, food, beliefs, and rituals.<sup>96</sup>

When changes are introduced to a culture, the effects are often reflected on the economic activities that sustain that culture. Therefore, I choose to focus on the following markers extracted from the definition of culture: jobs, activities, and daily routine. These concepts are applicable to the case of the Marsh Arabs, as they objectively reflect changes to the status of the surrounding environment. Therefore, as a researcher, I will be able to detect cultural change, such as erosion or disappearance. These markers are traceable. Thus, this indicator contributes to an adequate analysis of the change to the culture of the Marsh Arabs, because if a community can no longer sustain its economy, this is a telltale sign of cultural imbalance. This is especially true in the case of indigenous people, where the connection with the environment dictates the shape of the economy.

The two chosen elements of analysis connect closely to one another. In fact, for economic activities to be sustained and developed, they must be passed on to younger generations.

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<sup>96</sup> Shalom H. Schwartz, "An Overview of the Schwartz Theory of Basic Values," *Online Readings in Psychology and Culture*, 2(1), <https://doi.org/10.9707/2307-0919.1116>.



Economic activities reflect management of natural resources. These methods of management require knowledge and complex understanding of the ecosystem, which is something that is acquired by previous ancestors and passed on to younger generations. This process was described by Hugene Hunn as “consequence of subsistence-based production.”<sup>97</sup>

### *3.1.1 First Indicator: The economic activities of the Marsh Arabs:*

Indigenous peoples’ economic activities are referred to as indigenous economy, in which an economic system is established based on small scale professions represented in farming, fishing, mat weaving, and hunting. They represent a deep-rooted relationship with the ecological setting. The traditional economic systems of indigenous communities ensure sustainable utilization of resources, social responsibility, and harmonious relationships through cooperation. These communities seek to meet the basic needs of all their members through the sharing of food and labor. Gender relations and division of work in some communities are well defined, and in general, land based professions are conducted collectively.

Traditional economies in indigenous communities go beyond the economic realm—they are more than just livelihoods providing subsistence and sustenance to individuals or communities. In the words of Simon Brascoupé, “It is the traditional economy, living on the land and with the land that brings meaning to Aboriginal peoples.”<sup>98</sup>

For the case of the Marsh Arabs, the main professions they undertook were fishing, agriculture, and mat-weaving. They mastered these activities, and researchers explained that the techniques they used are quite unique, dating back to ancient times. These three professions comprised main

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<sup>97</sup> Juan Carlos Pérez and Velasco Pavón, “Economic behavior of indigenous peoples: the Mexican case” *Latin American Economic Review*, 2014, Volume 23, Number 1, p. 1.

<sup>98</sup> Rauna Kuokkanen, "Indigenous Economies, Theories of Subsistence, and Women: Exploring the Social Economy Model for Indigenous Governance," *American Indian Quarterly* 35, 35 n2 (2011), p. 215-240. doi:10.5250/amerindiquar.35.2.0215.

sources of income for the Marsh Arabs, and the whole community contributed to these activities.<sup>99</sup> The inhabitants engaged in these economic activities as part of their management of their ecological setting, and previous researchers highlighted these activities as special features of the marshlands. Using the indicator of economic activities, I present the ecological changes that occurred to the marshlands and consequently, how it reflected the radical cultural changes that occurred after the implementation of Hussein's development project.

### *3.1.2 Second Indicator: The Transmission of Traditional Ecological Knowledge (TEK) to the Younger Generations*

Matsumoto believes that a culture is the “set of attitudes, values, beliefs, and behaviors shared by a group of people, but different for each individual, communicated from one generation to the next.”<sup>100</sup> Thus to achieve the continuity and sustainability of a culture, attitudes, beliefs, values, and behaviors need to be passed on to younger generations. TEK entails the knowledge of skills, tasks, professions, and even techniques for performing these activities. If younger generations in indigenous populations have not been exposed or handed down vital information and knowledge of their community, then there is potential for cultural loss.

The Marsh Arabs were very keen on sustaining their culture, and elder people, who were very revered and respected, were often the source of knowledge and information. However, the whole community practiced the different tasks to optimize group success. These groups included younger people, who had the responsibility of taking over the tasks when they became older. For example, mature women had a clear responsibility for teaching younger girls how to carry out mat-weaving. Thus, the lack of traditional ecological knowledge actually threatens the continuity

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<sup>99</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>100</sup> Ibid

of a culture, as tackled in the previous chapter. One of the themes that best explains the case of the Marsh Arabs is cultural ecology. This notion depends on more tangible elements in explaining the relationship between people (inhabitants) and the ecological setting. Using this approach as my framework, I choose tangible, material indicators that reflect the ecological setting's effect on the culture of the Marsh Arabs to reach an objective result in my analysis. To this end, the main methods of analysis will be comparing the economic circumstances before and after the dehydration. Then I will analyze the knowledge possessed by younger generations, in attempt to find out if the culture was damaged beyond restoration.

### **3.2 Resources and Limitations:**

The limitations on this research included the inability to reach the marshes and to directly interview community members, and thus reliance on secondary data. It is very important to state at this stage that most Marsh Arabs no longer live on the marshlands and are scattered throughout Iraq's major cities, making identifying and accessing the community extremely difficult.<sup>101</sup> Additionally, accurate information and statistics for the time period before the restoration program presents a challenge, because the Iraqi government intentionally curtailed data publication, especially regarding the indigenous Marsh Arabs. Even before the 1991 uprising, the Iraqi government made it impossible for human rights workers to enter the area and make an adequate humanitarian assessment.<sup>102</sup> The only narratives about the humanitarian situation in the marshlands before the development project came from the migrants who fled. There are also many unanswered questions about the weapons and arsenal used by government

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<sup>101</sup> "Human Rights Questions: Human Rights Situations and Reports of Special Rapporteurs and Representatives: Situation of Human Rights in Iraq," United Nations: General Assembly, Last modified 15 October 1996, <http://www.un.org/documents/ga/docs/51/plenary/a51-496.htm>.

<sup>102</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

troops against the Marsh Arabs. Within this matter, there were three essential sources of secondary data:

First, a study conducted by Nadia Al-Mudafar Fawzi, Kelly P. Goodwin, Bayan A. Mahdi and Michelle L. Stevens, entitled “The Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women,” compares the lifestyle and daily routine of the Marsh Arabs before and after the development project. The method of research for this study was interviews with a selected group of women and younger girls to examine the potential existence of a generational gap, hence, the potential non-transmission of traditional knowledge. I am following in the footsteps of those authors by looking at the handover of information as well, both before and after Hussein’s development project.

The study presented two key findings which impacted this research. First, the interviews were conducted based on age groups, to determine the transmission of TEK. The comparison between different age groups revealed that younger generations undertook radically different jobs, because they do not have access to their parents’ knowledge. For instance, younger girls only worked in domestic labor, a pattern that was non-existent before the desertification. A lack of transmission of information is evidence of how a culture is affected by changes to the environment, because once the passing down of values, beliefs and behavior ceases, then cultural loss is inevitable. Secondly, using the aforementioned economic activities, the study evaluated ecological and cultural changes that occurred in response to the desertification of the Mesopotamian marshes. It shows how the roles of the inhabitants drastically changed after the desertification. Furthermore, it conducted interviews with different age groups to analyze transmission of TEK.

Another significant reference is the USAID conducted study referred to in Sam Kubba's book, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment*. This study discussed crucial results at a time when the international community invested huge support in the restoration program. It reveals that the Marsh Arabs who returned to their homelands did not stay and decided to migrate again. This was quite shocking to many researchers, as the restoration project had achieved its intended results, restoring around 60% of the land. I used this research as an analytical tool to explain the reasons behind the Marsh Arabs' migration flows and to show that restoring the culture does not simply come as a natural result of ecological restoration.

For a more concrete understanding of this issue, I analyzed the testimonies of the Marsh Arabs who returned to areas from which they had fled after 1991. Collecting and analyzing testimonies of the Marsh Arabs who returned back after the restoration program provided a window for understanding why the Marsh Arabs failed to stay in the marshlands, despite the restoration of over half the land. It is vital to understand their motives for leaving the marshlands once again, which is why their testimonies are crucial for this research. Many of these testimonies have been published in the media. The testimonies demonstrate that many of the displaced Marsh Arabs changed professions over the intervening 20 plus years. For instance, most had to shift to trade as a means of income and ceased to rely on their unique economic practices and knowledge in agriculture, fishing, or mat-weaving. Even after they returned to the marshes, many did not show an interest in resuming their professions and chose to continue with their new jobs. In my thesis, this particular matter is used as one of the elements that explain that restoring the land does not particularly mean that culture will be restored. The Marsh Arabs' personal reflections inform my research because it serves as the voice of the people directly affected.

Finally, this thesis relies on official documents describing the action plan of the restoration project. With this source of information, I analyze the American view on the attempted restoration of the Marsh Arabs' culture. Understanding this view will provide the explanation of why, at least in theory, the US believed the ecological restoration would lead to cultural restoration. Whether or not this actually materialized is the central focus of the analysis in the following sections.

So far, I have established the structure of the research, introduced the problem, provided a literature review, and explained my method toward analyzing it. In the upcoming section, I will use the aforementioned indicators to analyze the two elements of interference (development and restoration projects) to identify their effects on the culture of the Marsh Arabs. Finally, I will use this analysis to answer the broader research question.

## **Chapter Four**

### **The Effect of the Development Project on the Land and the Culture of the Marsh Arabs**

The ecological setting is important to the formation of inhabitant's culture. The Iraqi wetlands were exposed to aggressive and deliberate environmental destruction, which certainly affected the culture of the Marsh Arabs. This chapter will compare the Marsh Arab's ecological habitat before and after the implementation of the 1992 development project. Furthermore, it will assess the effects of ecological changes on the Marsh Arab's culture.

#### **4.1 The Relationship between People, Land and Culture**

The relationship between culture, land, and ecology has been the focus of numerous studies, which take multiple approaches to analyzing this relationship. This thesis acknowledges that there is an ongoing multilinear relationship between people, land, and culture. In other words, the three elements complement one another and constantly feed into one another.

The ecosystem is the framework within which the relationship and interaction between inhabitants and land takes place. In the Convention on Biological Diversity, an ecosystem is defined as "the dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit."<sup>103</sup> As such, an ecosystem can additionally be defined as "the geographically bounded system within which a defined group of organisms interact with both the abiotic and biotic components of the environment."<sup>104</sup>

When people live in a geographical location, they interact with the surrounding environment.

Through this interaction, they develop specific cultural responses that can be seen in their

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<sup>103</sup> "Article 2. Use of Terms," Convention on Biological Diversity, accessed October 08, 2017. <https://www.cbd.int/convention/articles/default.shtml?a=cbd-02>.

<sup>104</sup> Mark Q. Sutton, E. N. Anderson, *Introduction to Cultural Ecology*, (United Kingdom: Al Tamira Press London, 2014), third edition. <https://goo.gl/RcQ6Y8>.

economic, political, and social structures.<sup>105</sup> While culture is a notoriously difficult term to define, there are certain attributes of culture which are agreed upon in the literature. The following is a non-exhaustive list of these attributes:

- a) Culture is (acquired) learned. It is not genetic or biological, although it interacts in complex ways with human biology.
- b) Culture is shared by people as members of social groups; it is not an idiosyncratic attribute.
- c) Culture is trans-generational and cumulative in its development; it is passed from one generation to the next.
- d) Culture is patterned organized and integrated; a change in one part will bring about corresponding changes in other parts of the system.
- e) Culture is adaptive; it is the basic human adaptive mechanism, replacing the more genetically-based adaptive system.<sup>106</sup>

To emphasize, inhabitants adapt to their surrounding environment through culture, and communities differ accordingly. So, in traditional societies, the cultural system in which a person is born into tends to be more influenced by the natural environment. Meanwhile in industrialized cultures, the environment tends to be much more socioeconomic, with class and income being the major influencing factors. An ecological setting or a surrounding environment acts as the raw material for the inhabitants living in a given geographical area. Inhabitants manage their surrounding environment as per their own needs. For example, inhabitants use fertile land for agriculture and water bodies for fishing. They typically begin managing the environment at the very basic level, but eventually a system of management is developed to make decisions about

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<sup>105</sup>Ibid

<sup>106</sup> Roger M Keesing, "Theories of Culture," *Annual Review of Anthropology* Vol. 3 (1974), 73-97, <https://is.muni.cz/el/1423/jaro2007/SAN206/um/Keesing-Theories-Culture-ARA-1974.pdf>.



what resources to use and how to best use them. The decisions are made through a process that involves a firm knowledge of the environment. This knowledge is obtained, classified, and stored in oral tradition and in religion, where it is kept for future generations to use. This system acts as the framework for the cultural behavior which manifests in a community.<sup>107</sup>

One application of how this system evolves is how the land produces the economic activity of agriculture, which later develops into several other economic activities, such as trade. For example, the development of different economic activities could lead to the construction of a transportation system. In tandem with this evolving system, the community begins to shape social structures and divide tasks and responsibilities. To further illustrate this scheme in a very simple example, I will assume that this society depends on rainfall as a source of water for agricultural tasks. In the case of drought, this society will face many difficulties, and if the drought continues for a long period of time, it could lead to a change in the culture, as the community will no longer be able to rely on agriculture and must seek alternative methods to sustain its existence. The result is that the culture adapts to the surrounding environment and actually changes. However, in the chance of a prolonged drought, agrarian culture may eventually disappear. This directs us to another level of cultural change; radical cultural change could lead to cultural loss.<sup>108</sup> The concept of cultural loss mainly tackles situations of radical change, which is often linked to an aggressive environmental change. Cultural loss is defined as adverse impacts on the range of traditional activities, emotional well-being, or social relations

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<sup>107</sup> Mark Q. Sutton, E. N. Anderson, *Introduction to Cultural Ecology*, (United Kingdom: Al Tamira Press London, 2014), third edition. <https://goo.gl/RcQ6Y8>.

<sup>108</sup> Ibid

engaged in by an individual and/or the indigenous community as the result of changes in the land. Such losses can negatively affect major features in culture.<sup>109</sup>

The components of culture are all interlaced. Going back to the aforementioned example, some communities practice certain rituals, traditions, or prayers, believing that this will prevent drought and assure sufficient rainfall. These actions represent cultural behavior specific to a certain society. Thus, the relationship with a specific ecological feature was the dominant cause for inhabitants' very specific cultural behavior. This means many different aspects of culture, like the economic system, the social system, beliefs, and rituals and traditions are affected by the surrounding ecological setting.<sup>110</sup>

Finally, there is an ongoing, mutual relationship between the inhabitants and the ecological setting. Today, the primary mechanism by which humans adapt to their environment is through culture. Unlike biological adaptation, culture is an extremely flexible and rapidly adaptive mechanism because "behavioral responses to external environmental forces can be acquired, transmitted, and modified within the lifetimes of individuals."<sup>111</sup> Ecological setting is a major framework for cultural development. Culture adaptation acts as the bridge that connects the inhabitants with the surrounding environment. It is shaped and structured by the inhabitants, and its dynamic feature makes it highly adaptive to the ecological setting, ensuring the relationship between inhabitants and the land is an ongoing process.

This dynamic relationship between ecological setting, inhabitants, and culture is very evidently manifested in the case of the Marsh Arabs. The wetlands acted as a very rich resource to develop

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<sup>109</sup> Robin Gregory, William Trousdale, "Compensating aboriginal cultural losses: an alternative approach to assessing environmental damage," *Journal of Environmental Management* 28 December 2008, <https://www.cip-icu.ca/Files/Awards/Planning-Excellence/2010-HM-Planning-Publications.aspx>.

<sup>110</sup> Ibid

<sup>111</sup> Mark Q. Sutton, *Archaeology: The Science of the Human Past* (Pearson Education Inc. Fourth Edition), <https://goo.gl/QgyAtC>.

different economic activities and established a concrete framework for their culture. In the upcoming section, I will present the effect of ecological setting on shaping the culture of the Marsh Arabs.

## **4.2 Analyzing the Effect of the Ecological Setting on the Cultural Features before the Implementation of Hussein's Development Project**

In analyzing the effect of the ecological setting on the culture of the Marsh Arabs, I choose specific indicators explained in detail in the previous chapter. This thesis demonstrates the relationship or the link between the ecological setting and culture. Hence, analyzing and observing economic activities and the imparting of ecological knowledge to younger generations serve as indicators.

### *4.2.1 First Indicator: Economic Activities, Daily Tasks and Routine (Fishing, Farming and Manufacturing Crafts)*

The Marsh Arabs' daily economic activities were farming, fishing and buffalo-breeding. For over millennia, their society and economy had also been largely supported by reed-associated crafts. They developed a unique way of life that tied them intimately to their environment. As a result of this long history of human management, the marshlands became a complex landscape, whose inhabitants mastered selective harvesting of more than eight different sizes and textures of reeds, the use of fire, as well as hunting and fishing.<sup>112</sup>

Inhabitants' divided their occupation into cultivators, reed-gatherers, and buffalo-breeders. The typical Marsh Arabs household engaged in more than one occupation, since 82% of households fished, 49% hunted, 66% farmed, 58% cultivated crops for food, 75% used reeds, 78% kept animals or birds, and only 2% worked for a wage.<sup>113</sup>

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<sup>112</sup> S.M. Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009), pp. 4- 157. ill. 8. Maps 3.

<sup>113</sup> Ibid

#### 4.2.1.1- Fishing:

The Iraqi wetlands provided natural spawning grounds, nurseries, and feeding places for fish. The availability of adequate natural food resources for the fish population, therefore, facilitated its growth in the Iraqi marshes in comparison with other Iraqi water bodies. Fish was always an important component of the marshland diet. Therefore, fishing was the preeminent job undertaken by the Marsh Arabs. The total annual catch from the marshes exceeded 14,000 tons. The majority of the population contributed to the process of fishing, starting from producing the necessary tools, through selling products on the Iraqi markets. Initially, fish were caught by spear – an efficient and effective method– but most Marsh Arabs later used nets to increase the quantity of their catch in order to produce a surplus for export. Some of the catch was transported, often by boats manufactured by the Marsh Arabs, to the local markets of southern of Iraq, reaching Baghdad, Basra, and beyond.<sup>114</sup>

The Marsh Arabs are considered to be the master fishermen of southern Iraq. They invented the most efficient tools and perfectly sized boats to go fishing. They learned this from their ancestors, who lived on the lands, while continuously exploring and discovering their surroundings. The Marsh Arabs conducted many of their economic activities, particularly fishing, in groups. Four or five men would typically fish together, and most of the catch would be sold. Fishermen set out at night in locally-made canoes, to which lamps were attached, and utilized the net-fishing technique; these nets were also locally produced. During the month of September, small fish were abundant, and fishermen attracted them using the light from the lanterns. Moving towards the light, the fish would jump onto the canoes. Other techniques to draw migrating fish included taking advantage of strong currents by setting fences across the

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<sup>114</sup> Ibid

rivers. There were different techniques for different types of fish,<sup>115</sup> and with such techniques the Marsh Arabs acquired very large catches. Fishing was considered an essential source of income and a corner stone of the culture of the Marsh Arabs.



Figure 3: Marsh Arabs fishing<sup>116</sup>

#### 4.2.1.2- Agriculture:

Farming is historically a complicated occupation that requires foresight, diligence, and specific skillsets. From the earlier Mesopotamian civilization, the Marsh Arabs learned techniques for irrigation and building canals. Researchers who visited the wetlands saw evidence of abandoned canals built thousands of years prior. Canals and ditches were built to deliver water to the land for farming and to redirect water to the farming fields.

Once again, the Marsh Arabs used handmade constructed with manufacturing techniques that they learned from their ancestors. Indeed, they were the masters in this arena.<sup>117</sup> Local

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<sup>115</sup> S.M. Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009).

<sup>116</sup> <https://www.pinterest.com/pin/350928995939783927/>.

<sup>117</sup> Ibid

agriculture included growing wheat, barley, corn, rice, dates, and citrus. All the members of the family contributed to the activity of agriculture, whether men, women or children.<sup>118</sup>

#### 4.1.2.3- Manufacturing Crafts:

##### - Boat Manufacturing:

The only way to communicate between different villages in the wetlands was via the water.

Therefore, building boats or canoes was an essential task accomplished by local craftsmen. There were different types of canoes and boats. For instance, the Mashuf was made from wooden planks with carved wooden ribs in the center. The techniques used to build the Mashuf were very unique and date back to the Sumerian civilization.<sup>119</sup> There were also specific boats for transporting reeds; fish, fruits, and vegetables; and human transportation. . The thriving local boat industry provided transportation and employment for the local community.

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<sup>118</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26 2017), 2017, <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.

<sup>119</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

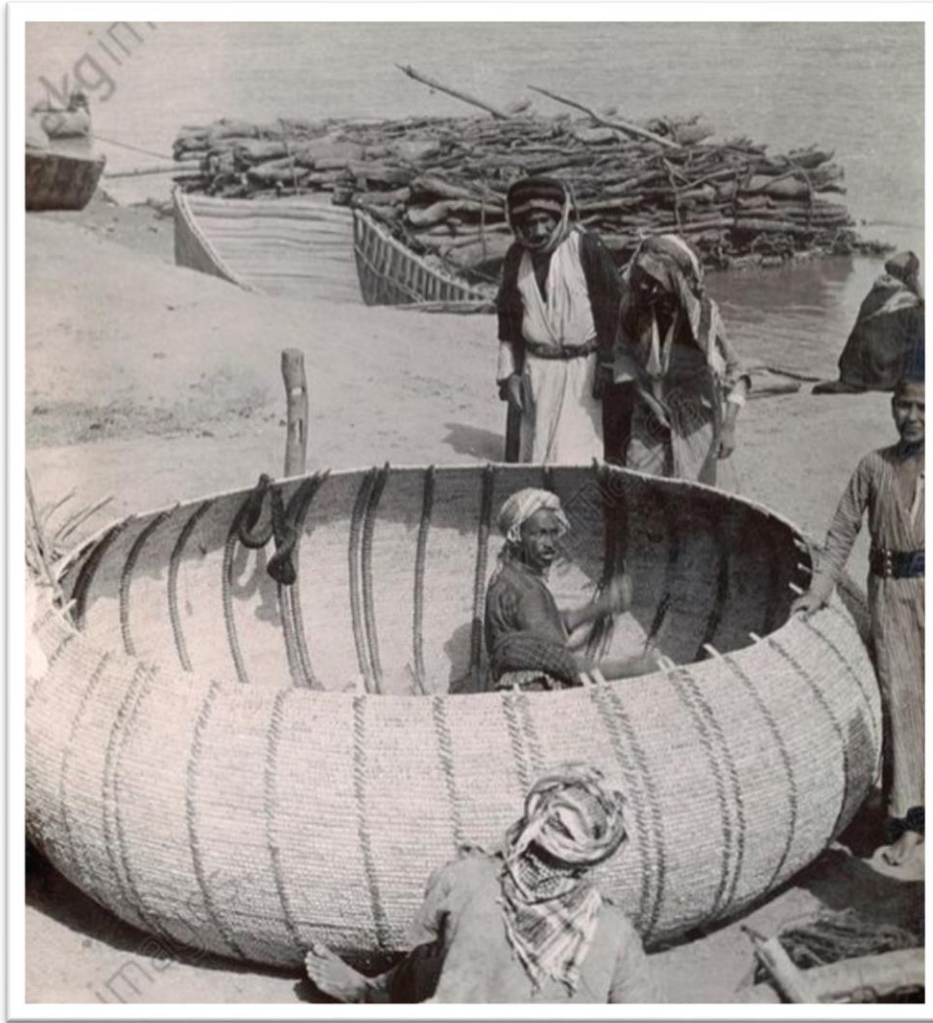


Figure 4: Marsh Arabs manufacturing canoes and boats<sup>120</sup>

- Reed-gathering and mat-making:

Women mainly conducted mat-weaving activities; however, the process of gathering reed was dominated by men. Women played a vital role in teaching younger girls the skills of mat-weaving. The Marsh Arabs knew all aspects of reed harvesting: how to obtain it, where to find it, and the perfect time for harvesting it. They used a wooden-handle, toothed sickle to cut down the reeds. Like the majority of agricultural instruments, these tools were locally manufactured.

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<sup>120</sup> <https://www.pinterest.com/pin/350928995940141953/>.

The Marsh Arabs also knew the different types of reeds and the various products which they could be used to produce. For instance, some reeds could be utilized for constructing boats and canoes, while another type was better for mat-weaving, and a third type was even used for house construction. Within the third category, different types were used to create household materials that could serve as a method of protection during floods.

From the reeds and the mud of the rivers, the Marsh Arabs built their houses, called floating baskets.

Clay inscriptions and cylindrical seals inscribed with the images of houses similar to these [homes] were found in the historical city of Ur near Nasiriyah. This proves that these houses made of reed are the same as those built by the Sumerians thousands of years ago.<sup>121</sup>

Said Abu Abbas al-Assadi, a sheikh from the Bani Asad tribe. Assadi lives in al-Jabayesh district, in a house made of reeds, about 70 kilometers from the city center of Nasiriyah. The area accommodates villages floating on the marshes. Assadi said, “The raw material from which these houses are built are the plants and large papyrus fields that grow in water. Modern construction materials such as cement and bricks are not used here.”<sup>122</sup> The houses were very adequate for the weather in the marshes, because they provided a cool environment due to air currents entering through the perforated walls of the house. In the winter, the walls are covered with special materials to insulate against the rain.<sup>123</sup> The reeds also served as protection against flooding, which as previously noted, modern construction materials would not do. The various reeds indigenous to the region provided construction material and employment for the Marsh Arabs.

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<sup>121</sup> S.M. Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009).

<sup>122</sup> Ibid

<sup>123</sup> Ibid



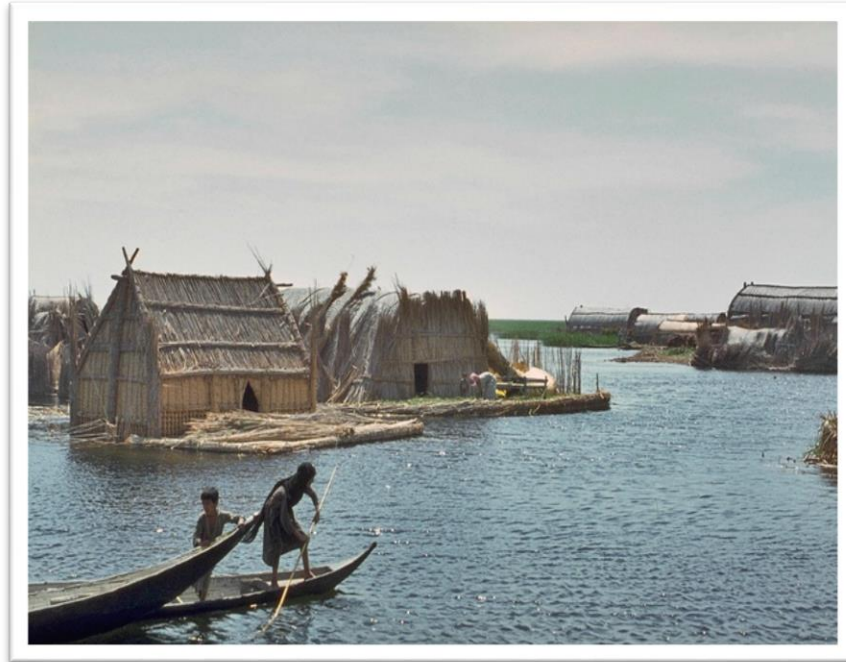


Figure 5: Reed houses<sup>124</sup>

- Medical Herbs:

The Marsh Arabs did not seek modern medical assistance. Instead, they used naturally-made remedies to substitute for medicine. Women were known for their expertise in creating all-natural, homemade remedies. They often used specific indigenous types of plants to produce these medicinal remedies.<sup>125</sup>

<sup>124</sup> The Floating Basket Homes of Iraq: A Paradise almost Lost to Saddam, <http://www.messynessychic.com/2014/11/12/the-floating-basket-homes-of-iraq-a-paradise-almost-lost-to-saddam/>.

<sup>125</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26 2017), 2017. <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.

#### 4.2.2 *Second Indicator: The Transmission of Traditional Ecological Knowledge to the Younger Generations*

Transmission of traditional ecological knowledge:

As demonstrated in the aforementioned section, the economic activities of the Marsh Arabs depended mainly on the ecological setting. Sustaining these activities required the acquisition of many skills and knowledge, and they were transmitted to the younger generations as TEK. The concept of “transmission of traditional ecological knowledge” addresses the method or channel that transmits culture and knowledge of the ecosystem to the younger generation. It is considered to be a successful method of guaranteeing the sustainability of the culture. So, in the process of sustaining culture, it acts as the method to achieve this desired outcome.<sup>126</sup>

The term traditional ecological knowledge (TEK), generally refer to knowledge systems embedded in the cultural traditions of regional, indigenous, or local communities. Traditional ecological knowledge includes types of familiarity with traditional technologies of subsistence (e.g. tools and techniques for hunting or agriculture), ecological knowledge, traditional medicine, celestial navigation, and other disciplines.<sup>127</sup> These types of knowledge are crucial for the subsistence and survival of a culture. They are generally based on accumulations of empirical observation and on interaction with the environment.

In many cases, traditional knowledge has been orally passed down for generations from person to person. Some forms of traditional knowledge find expression in oral transmission as stories,

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<sup>126</sup> Iain Davidson-Hunt, J. and Fikret Berkes. “Nature and Society through the Lens of Resilience: toward a Human-in-Ecosystem Perspective.” Chapter. In *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*, edited by Fikret Berkes, Johan Colding, and Carl Folke, 53–82. Cambridge: Cambridge University Press, 2002. doi:10.1017/CBO9780511541957.006.

<sup>127</sup> Ibid

legends, folklore, rituals, songs, and laws, while other forms of traditional knowledge are expressed through practice.<sup>128</sup>

With time, cultures obtain, categorize, and document knowledge about their environments. The vast majority of this knowledge was previously unwritten and was instead passed verbally from generation to generation.<sup>129</sup> The amount of knowledge gained over time is stunning. Individuals in traditional cultures usually know a great deal about their environment, as they work in these ecological settings every day. Many of them hold specialized knowledge relating to medicine, local religion, and relevant trades. In many cases, professional archeologists sought support and help from such inhabitants due to their outstanding level of knowledge of their habitat.<sup>130</sup>

In the case of the Marsh Arabs, the cycle of transmission of knowledge was well established from ancient times. The marshes were once inhabited by the ancient Sumerian and Akkadian agricultural communities. According to early researchers, the techniques used in farming and fishing were passed down through families from the time of the Sumerians.<sup>131</sup> Therefore, there was a vivid continuity of transmitting the traditional ecological knowledge to the upcoming generations. Passing on the knowledge and the skills took place in the marshlands through different channels.

However, this thesis argues that the changes introduced to the environment since the 1990s have interrupted the flow of knowledge from one generation of Marsh Arabs to the next. This gap in

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<sup>128</sup> Nancy J. Turner, Marianne Boelscher Ignace, Ronald Ignace, "Traditional Ecological Knowledge and Wisdom of Aboriginal Peoples in British Columbia," *Ecological Applications* Vol. 10, No. 5 (2000), pp. 1275-1287, [https://www.fws.gov/nativeamerican/pdf/tek\\_turner-2000.pdf](https://www.fws.gov/nativeamerican/pdf/tek_turner-2000.pdf).

<sup>129</sup> Ibid

<sup>130</sup> Ibid

<sup>131</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

information flow made life in the marshlands unappealing to younger Marsh Arabs, in spite of the recent ecological restoration.

- Group practice:

Firstly, fishing, agriculture and mat-weaving took place in groups, including men, women, and children; hence, knowledge was not held in the hands of men alone. After the 1991 uprisings, some men were imprisoned and even executed, so women, with the help of their children, continued handling daily tasks, because they knew the skills and the techniques. Secondly, the Marsh Arabs were very unique in the way they built houses, and younger boys often assisted their parents in the process. Practicing this task on a regular basis allowed children to acquire the skills and guaranteed that the transmission of house building knowledge to the younger generations. Finally, specific tribes specialized in mat-weaving, including the women and girls of Ash-Chalabiyah. Mothers taught younger girls how to carry out mat-weaving tasks and then supervised their daughters as they practiced.<sup>132</sup>

- Orally:

The elders taught the techniques of agriculture, fishing, and manufacturing crafts. These elders or Sheikhs of each tribe, educated younger boys and girls in these skills during social gatherings in guesthouses called “Mudhif.” Indeed, Marsh Arab youths were not provided with formal education, but the way they were taught how to fish or farm constitutes a form of education.<sup>133</sup> In the evenings, social gatherings were held in the Mudhif, where elder people would explain the history and sufferings of the Marsh Arabs younger boys. This story-telling strengthened younger

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<sup>132</sup> Aron Schwabsh, “Ecocide and Genocide in Iraq: International Law, the Marsh Arabs, and Environmental Damage in Non-International Conflicts.” *Colorado Journal of International Environmental Law & Policy* Vol. 27 forthcoming, TJS� Public Law Research Paper No. 03-08 (2003), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=442541](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=442541).

<sup>133</sup> Ibid

generations' relationship to their identity and culture.<sup>134</sup> On one of the very early field visits to the marches, one of the inhabitants explained the significant importance of the Sheikh's role. He said:

In every village, there was a Mudhif, which acts as the social, political, judicial and religious center of Marsh Arab life. It is used to display hospitality and settle disputes as well as to conduct diplomacy with other tribes and religious festivities. The design of the Mudhif reflects local traditions. For instance, there are always an odd number of reed pillars in the Mudhif, allowing the host of a meeting to sit along one side wall with an equal number of guests to his right and left. This ensures that the tribal sheikh remains at the center of decision-making.<sup>135</sup>

Mudhif houses were not merely guesthouses to gather men after long working days. They were also where these men practiced their rituals and folklore. They sang and talked about their victories, histories, and ordeals.<sup>136</sup>

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<sup>134</sup>Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>135</sup>Ibid



Figure 6: The Mudhif house

The case of the Marsh Arabs is a clear demonstration of the relationship between people and land, otherwise known as human ecology. The inhabitants of the marshes managed their resources and established their own governing entities and socioeconomic structures to do so. They developed their own techniques in farming, fishing, reed-gathering, and mat-weaving, and medical remedies, drawing on historical practices in the region. Their need for trade urged them to develop an intricate transportation system between the neighbouring villages in the wetlands. All the community members took part in the daily tasks, regardless of age or gender; hence, they formed a unique culture as a result of the interaction between the inhabitants and the ecological setting. Through group practice and oral tradition, they maintained transmission of TEK in attempt to pave the road for the continuity of their culture.

In the upcoming section, I monitor and track the environmental changes that occurred to the marshlands as a result of the development project, using the same indicators of analysis.

### **4.3 Analyzing Environmental and Cultural Features after Hussein's Development Project**

Although several researchers and scholars highly cautioned Hussein's government against executing the water diversion project, the diversion was completed over a span of 9 months, ending in December 1992.<sup>137</sup> As explained in the introductory chapters, this project caused severe drought of the marshland. The motive behind the project, as it is widely accepted, was punishment of the Marsh Arabs for their attempted uprising in 1991.<sup>138</sup>

In this section, I will analyze the effect of the development project on the ecological setting of the Marsh Arabs and then I will address its effect on culture.

#### *4.3.1- First indicator: economic activities, daily tasks and routine (fishing, farming and manufacturing crafts)*

##### **4.3.1.1- Fishing:**

"There were no fish, no grass, so of course we couldn't stay," said Hana, a mother of four. "The village just died," she added, explaining the difficult conditions she and her family faced after the diversion was completed.<sup>139</sup> Upon the completion of the development project, Hanna left the marshes and moved to Basra, hoping to provide a basic life for herself and her family. Fishing quickly diminished after the wetlands were dried up. It was an economic disaster for the residents of the marshes, as hundreds of thousands of tons of fish could no longer be exported to

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<sup>137</sup> A Human Rights Watch Briefing Paper, *The Iraqi government assault on the Marsh Arabs* (Jan 2003), <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

<sup>138</sup> Aron Schwabsh, "Ecocide and Genocide in Iraq: International Law, the Marsh Arabs, and Environmental Damage in Non-International Conflicts." *Colorado Journal of International Environmental Law & Policy* Vol. 27 forthcoming, TJSJ Public Law Research Paper No. 03-08 (2003). [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=442541](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=442541).

<sup>139</sup> Peter Schwartzstein, "Iraq's Marsh Arabs test the waters as wetlands ruined by Saddam are reborn, *The Guardian*, January 18, 2017, accessed September 26, 2017. <https://www.theguardian.com/global-development/2017/jan/18/iraq-marsh-arabs-test-the-waters-wetlands-ruined-by-saddam-reborn-southern-marshes>.

Baghdad, and the farms on the edges of the marshlands becoming saltpans, as the brackish water evaporated.<sup>140</sup> Due to the very low number of fish, the Marsh Arabs attempted new techniques for fishing and abandoned the traditional ones. They started to use high-voltage transmitters, which stun the fish but also kill bottom-feeders and thereby disrupts the food chain.

#### 4.3.1.2- Agriculture:

The marshland became very salty, and it was incapable of sustaining any agricultural activity whatsoever. Reed production declined precipitously, creating a lack of materials for handicraft and for building houses. Today, reed mats are only occasionally seen on rooftops to provide shade for plastic water containers.<sup>141</sup> The disappearance of farming and fishing activities was a matter of focus for a study conducted by the *Ecosystem Health and Sustainability*, a joint journal of the Ecological Society of America and Ecological Society of China. The study, entitled "Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women," aimed to evaluate ecological and cultural resilience in response to desertification of the marshlands of southern Iraq. The study interviewed 34 women from different age brackets. The questions of the interview were aimed at analyzing the status of the Marsh Arabs after the development project.

The results of this study showed that many women now describe themselves as having primarily domestic responsibilities; no respondents reported these activities prior to dehydration. The figure below shows the disconnection of women from the ecological system, and hence, the

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<sup>140</sup> Marc Santora, "Aftereffects: Southern Iraq; Marsh Arabs Cling to Memories of a Culture Nearly Crushed by Huessein," *The New York Times*. <http://www.nytimes.com/2003/04/28/world/aftereffects-southern-iraq-marsh-arabs-cling-memories-culture-nearly-crushed.html>.

<sup>141</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26 2017), 2017, <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.



interruption of their daily routine. Women were specialized in mat-weaving and as seen in the figure below, there is a significant drop in their contribution due to the low production of reed.<sup>142</sup>

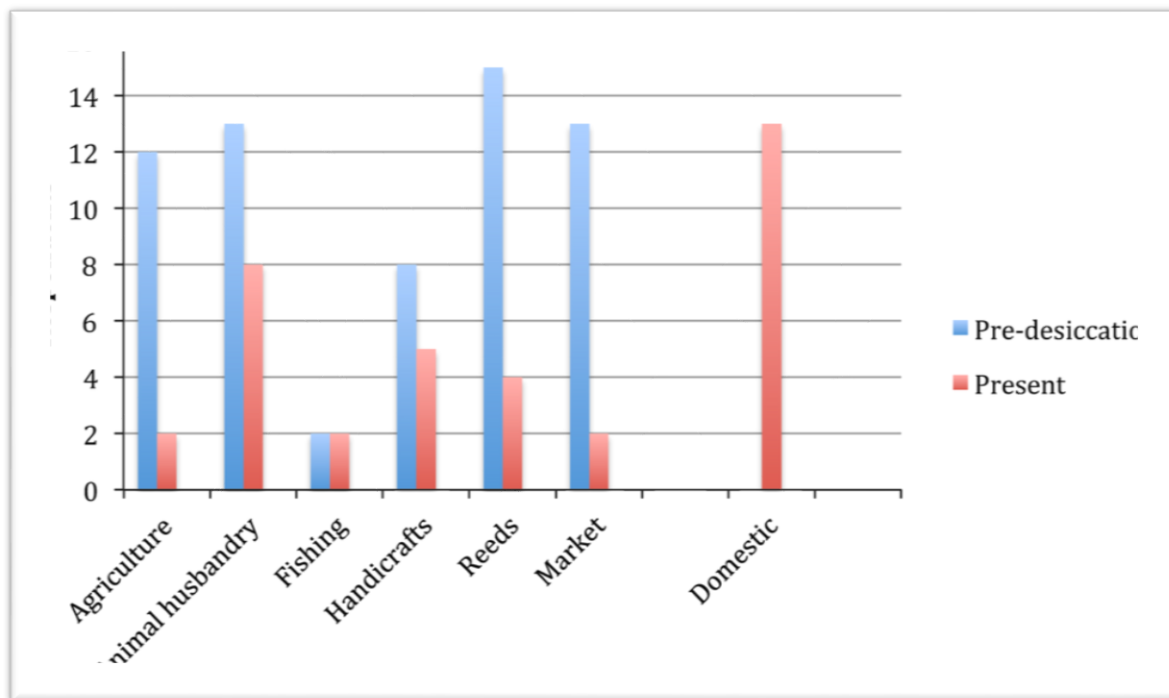


Figure 7: Women's activities before and after the development project<sup>143</sup>

#### 4.3.1.3- Manufacturing Crafts:

The interviews conducted for the study showed that only one old woman remembers using locally available plants for medicinal purposes. Most village women with the social memory of gathering and utilizing medicinal plants for healing have passed away, and no one has taken their place. Instead, families go to nearby government clinics to receive treatment and pharmaceutical medication for illnesses.<sup>144</sup>

<sup>142</sup> Ibid

<sup>143</sup> Ibid

<sup>144</sup> Ibid

Furthermore, after the wetlands were drained, the Marsh Arabs stopped manufacturing boats. Without the water, there was no plant growth, thus no reeds for the mat-weaving, bringing the activity to a halt.

#### 4.3.2 *Second indicator: The Transmission of Traditional Ecological Knowledge (TEK) to the Younger Generations*

This indicator is the determining element in sustaining a culture of any given community. If the knowledge of the Marsh Arabs was not imparted on the younger generations, then their chance of sustaining the culture becomes very weak, to the point of almost nonexistent.<sup>145</sup>

As shown in the previous indicator, the environment could no longer support major economic practices like farming and fishing, and hence, younger generation that grew up during the drought did not experience how to practice these activities. In other words, they do not have any knowledge to resume these activities. In 2003, USAID conducted a study which showed that individuals below the age of 45 did not have their parents' farming and fishing skills. As a result, they were not in favor of returning to the marshlands. According to the study cited in the previous section, 59% of women between the ages of 20 and 34, either never learned how to make traditional handicrafts or have discontinued making them.<sup>146</sup> None of the interviewees described themselves as engaging in domestic activities before the development projects. Yet today, most Marsh Arab women commonly stay at home and leave the financial support of the family completely to men.

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<sup>145</sup> Robert Melchior Figueroa, Indigenous Peoples and Cultural Losses - Oxford Handbooks (Oxford Handbooks - Scholarly Research Reviews), June 16, 2017. Accessed October 04, 2017. <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199566600.001.0001/oxfordhb-9780199566600-e-16>.

<sup>146</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26 2017), 2017. <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.

The figure below compares between the participation of elder women and younger women in various economic activities. It shows that younger women stopped practicing the tasks and the crafts that the Marsh Arabs were known for, which characterizes a definite interruption of the transmission of TEK.

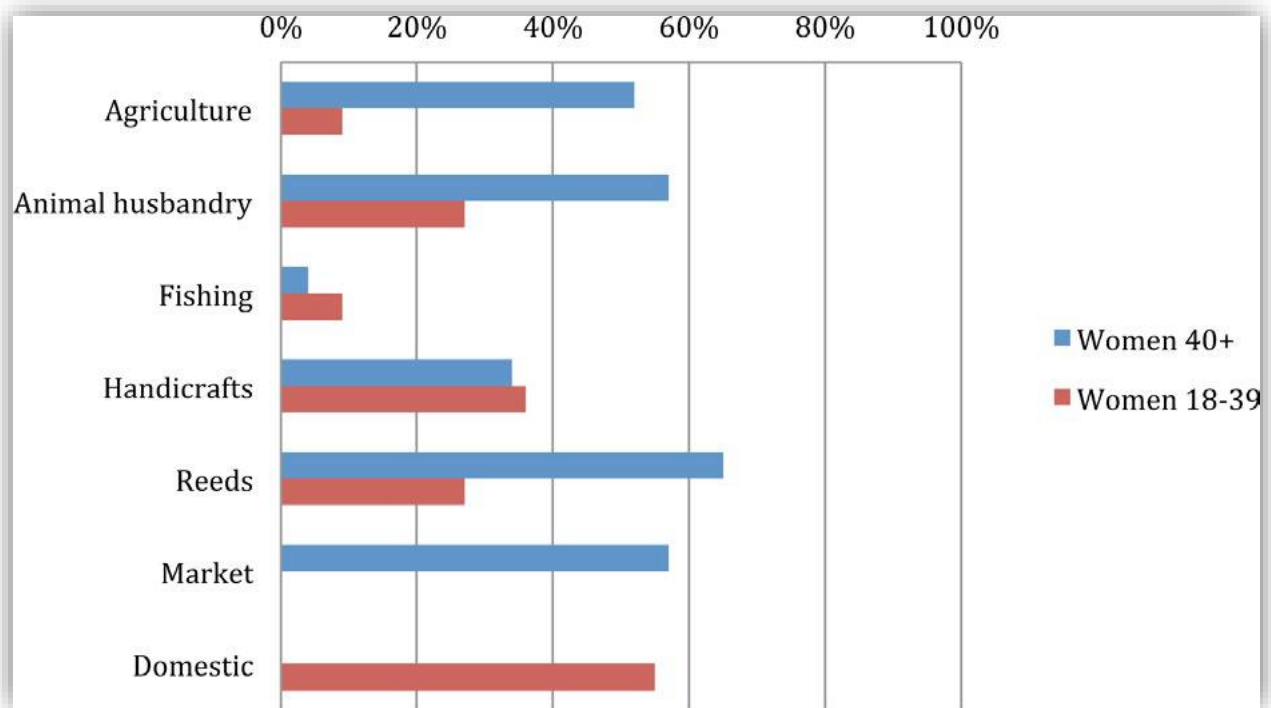


Figure 8: Comparing between the different age groups in regards to economic activities<sup>147</sup>

As for the Mudhif guesthouses, a key source of handover of traditional knowledge with a significant social and cultural value, most were destroyed as a result of the development project. Unfortunately, it is quite challenging to rebuild Mudhifs, since the required reed is now very scarce. Another issue is that more than half of the inhabitants have already left the marshlands, so building the Mudhifs is no longer seen as an essential task given there is little hope and a great level of detachment within younger generations.

<sup>147</sup> Ibid

It is worth noting that the aforementioned study was published in 2016, which is almost 12 years after the complete execution of Hussein's development project. Hence, it should be taken into consideration that additional externalities affected the ecological and the cultural, and pollution could be one of these externalities. Nevertheless, the development project acted triggered this radical change, which acted as an environmental and cultural genocide.

#### **4.4 Conclusion**

After comparing the situation before and after the development project, it is clear that the environment and the culture were highly damaged, if not destroyed for the following reasons:

- Suspension of economic activities represented in regular jobs, tasks and daily routine:  
There were very few fishermen and farmers after the drainage, and women stopped playing roles in outdoors activities. In addition, the manufacturing of houses and Mudhifs out of the reeds came to a halt.
- Abandoning skills and professions: The population now uses explosives for fishing instead of the handmade tools they once manufactured. In building houses, they use cement instead of reeds. They no longer carry out mat-weaving or manufacture specialized boats.
- Interruption to the traditional ecological knowledge: As shown by the previous figures, younger boys and girls lacked the specialized and essential skills and knowledge that all Marsh Arabs once held. Skills and techniques disappeared as well, such as forming medical herbs and fishing and farming techniques. A dominant indicator in cultural viability is the transmission of the TEK to younger generations. TEK systems are increasingly acknowledged for their contribution to sustaining biodiversity and

ecosystem services and to building cultural resilience in the face of environmental changes, as represented in the development projects.<sup>148</sup>

After the complete execution of the development project, journalists and researchers analyzed the ecological situation in the marshes. One example of the academic discourse can be found in the British newspaper, *The Independent*, which declared in one of its publications the death of the wetlands ecological setting. It stated

The encirclement and destruction of the Marsh Arabs and the annihilation of their 5,000-year-old culture have been brought about by the deliberate draining of their unique habitat - the 6,000-square-mile marshes of southern Iraq. This environmental and human disaster has been long in the planning. The Iraqi regime continues to deny it. It claims the draining was part of an agricultural improvement plan which will benefit the people of the region.<sup>149</sup>

Thus, a culture of thousands of years, and a land that witnessed history, triumphs, and losses, was lost due to a politically-motivated project that aimed to destroy the culture. And it surely did. Throughout history, many of the communities that experienced cultural loss were indigenous peoples, who were deeply dependent on their ecological setting and whose ecological setting was exposed to drastic intentional environmental distress, such as in the case of the Marsh Arabs. Such environmental distress was expressed by one of the fishermen who migrated to Basra. Amjad Mohamed explained that for 12 years he lived in a poor and neglected neighborhood on the outskirts of Iraq's second largest city. He worked as a laborer in the oil fields and tried his

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<sup>148</sup> Ibid

<sup>149</sup> Michael Wood, "Saddam drains the life of the Marsh Arabs: The Arabs of southern Iraq cannot endure their villages being bombed and their land being poisoned, and are seeking refuge in Iran. Michael Wood reports from Huwaiza Marsh on the death of a 5,000-year-old culture," *The Independent*, August 27, 1993, accessed September 26, 2017. <http://www.independent.co.uk/news/world/saddam-drains-the-life-of-the-marsh-arabs-the-arabs-of-southern-iraq-cannot-endure-their-villages-1463823.html>.

hand at catching fish in nearby streams. Throughout 12 years, Mohamed dreamt of returning to the marshes. When the US- led invasion started, he took his belongings and headed back home. However, he did not stay for long, he returned to Basra. He explained that the circumstances have drastically changed and living in the marshes was almost impossible, even though with water being reflooded. This case reflects the culture loss the marshes experienced.<sup>150</sup> The Marsh Arabs didn't experience the familiar feature of cultural change, on the contrary their culture was deliberately damaged beyond restoration.

Cultural change is inevitable, as culture mainly adapts to its surrounding environment. That is indeed a common feature of all cultures, but the question is what happens if the ecological setting within which a culture exists is extremely damaged? In the case of the Marsh Arabs, researchers who visited the wetlands in the middle of the twentieth century explained that even though the Marsh Arabs were able to maintain special cultural features that go back to the Sumerians, they also experienced the familiar feature of cultural change. One of the reasons behind this constant change was the increasing trade activities that took place between Basra and the marshes. It brought some newly acquainted cultural features represented in developing transportation and trade systems. However, this thesis is analyzing the suspension of the economic activities that shaped the culture of the Marsh Arabs, caused by deliberate ecological damage.<sup>151</sup>

As explained earlier in this chapter, the elements that constitute the concept of culture are all interrelated and affect one another. In other words, once the wetlands were drained, the economic activities were suspended, leading to change in the social structure of the society and

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<sup>150</sup> Peter Schwartzstein, "Iraq's Famed Marshes Are Disappearing—Again." *National Geographic*, July 9, 2015, <https://news.nationalgeographic.com/2015/07/150709-iraq-marsh-arabs-middle-east-water-environment-world/>

<sup>151</sup> S.M Salim, *Marsh Dwellers of the Euphrates Delta* (London: Athlone Press, 2009).

the roles of its inhabitants. For example, the Mudhif, once so integral to TEK, has nearly no role whatsoever today. Moreover, the TEK that the Marsh Arabs acquired has been slowly erased, because it has not been passed on to future generations, again due to the disappearance of the ecological setting.

Cultural loss refers to adverse impacts on the range of traditional activities, emotional well-being, or social relations engaged in by an individual and/or the indigenous community as the result of changes in the land. Such losses can include reduction in fishing, hunting, or trapping activity; losses of identity through the curtailment of these activities; reductions in health, which may be linked to contamination of traditional foods or adverse emotional and psychological impacts; and negative effects on cultural, social, and economic relations that historically were based on these altered activities.<sup>152</sup>

There is thus a difference between cultural change and cultural loss. The wetlands faced drastic environmental imbalance which caused paralysis to the ecosystem. When the inhabitants were forced to migrate, they faced major difficulties ahead of practicing their professions, and many even shifted their profession. The culture of the Marsh Arabs is not merely the economic activities that sustained the community. However, these economic activities played a vital role in shaping the culture and synchronized its social structure, set of beliefs, and traditions.<sup>153</sup>

The second turning point for the Marsh Arabs was in 2003. The US- led a restoration program, which according to experts caused significant success in restoring the wetlands, gave hope that cultural life could return to the marshes. In the next chapter, I will assess the effects of the

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<sup>152</sup>Robin Gregory and William Trousdale, "Compensating aboriginal cultural losses: an alternative approach to assessing environmental damage," *Journal of Environmental Management*, <https://www.cip-icu.ca/Files/Awards/Planning-Excellence/2010-HM-Planning-Publications.aspx>.

<sup>153</sup> Ibid

restoration program on the culture of the marshes. In other words, if the water is back and the land is arable for farmers, will the culture be restored?

It must be made clear at this stage that this thesis is not focused on examining whether the culture of the Marsh Arabs was destroyed. Culture is a very complex notion and is dynamic in nature, making it ever-changing. Hussein's project may have left the culture of the Marsh Arabs with drastic changes, with losses, or even with damage beyond the point of restoration. But this thesis looks into whether this damage, whatever may be classified as, can be restored. This is what will be examined in-depth in the next chapter.



## **Chapter Five**

### **The Effect of the US-Led Restoration Program on the Land and the Culture of the Marsh Arabs**

In 2003, a new development project was executed in the Iraqi wetland. This time, international stakeholders led by the United States carried out the project, which they claimed would repair and even restore the wetlands. These broad aims brought hope to many Marsh Arabs. In this next section, I analyze the effect of the American-led development program on the land and culture of the Marsh Arabs, in order to assess the possibility of restoring the culture if the land is revitalized.

#### **5.1 A Brief Overview of the US-led Restoration Program**

In 2003, the US Agency for the International Development (USAID) and the US State Department Bureau for Oceans and International Environment and Scientific Affairs developed an action plan for rehabilitation of the marshlands. By the end of that year, the American government announced the execution of this restoration program.<sup>154</sup> The program gained international attention, with scholars starting to turn their focus to the marshlands, an area kept well-hidden and out of reach for generations. There was also an expectation that vast amounts of natural resources would potentially be discovered in the area.<sup>155</sup>

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<sup>154</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting the Marsh Dwellers and Restoring The Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003). [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

<sup>155</sup> Peter Schwartzstein, "Iraq's Marsh Arabs test the waters as wetlands ruined by Saddam are reborn, *The Guardian*, January 18, 2017, accessed September 26, 2017. <https://www.theguardian.com/global-development/2017/jan/18/iraq-marsh-arabs-test-the-waters-wetlands-ruined-by-saddam-reborn-southern-marshes>.

With a tremendous amount of financial and technical support, the program aimed to restore almost 70% of the land by the year 2006 and to provide social services to the inhabitants. The ultimate goal of the project was to facilitate the return of the Marsh Arabs to their hometowns.<sup>156</sup>

While the program had numerous components, the ones relevant to this research are as follows:

- Pilot restoration, which included reflowing water to drained areas and constructing wastewater treatment systems to improve sewage treatment.<sup>157</sup>
- Social and economic assistance, which included providing public health services. One aspect of this assistance was initiating interventions to support agriculture, water management, and other areas. It also included identifying other employment options for Marsh Arabs.<sup>158</sup>

The USAID and Development Alternatives, Inc. (DAI), along with other entities, have aimed to not only restore the ecosystem, but also to improve the socioeconomic conditions of the marsh dwellers. The USAID brief paper explained that the US government was keen on achieving ground-rooted restoration and development in the area. Hence, it constructed a number of projects to respond to the humanitarian and development needs of the Marsh Arab community, including health, education, electricity, and infrastructure.<sup>159</sup> The 2003 international effort to revitalize the Iraqi marshlands appeared to include assessment of and provisions for addressing the needs Marsh Arabs.<sup>160</sup>

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<sup>156</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting The Marsh Dwellers and Restoring The Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003), [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

<sup>157</sup> Ibid

<sup>158</sup> Ibid

<sup>159</sup> Ibid

<sup>160</sup> Ibid

## 5.2 The Results of the US- led Restoration Program (2003-2006)

The wetlands were re-flooded by breaching dams and embankments, opening channels' gates, and ceasing the pumping of water. As of June 2004, up to 40% of the former marshlands had been re-wetted.<sup>161</sup> The project's social service programming was a clear aspect of the agenda and was implemented successfully. For instance, the US-led restoration program provided the community of the Marsh Arabs with schools, medical clinics, and clean water.<sup>162</sup> In the area of health care development, the program was able to implement 88 projects on health services alone, including the construction of 58 health centers, provision of 12 mobile clinics, and 10 ambulances for use by the Marsh Arab community.<sup>163</sup> Establishing agricultural programs was also a priority, including the DAI's efforts to plant 1,000 date palms and improve the health of water buffalo through aquaculture. Other activities undertaken by the project included: increasing cultivated land, planting eight nurseries with 1,500 palm seedlings, serving 21,000 patients through two health clinics, restocking 300,000 fish fingerlings, and treating 9,972 animals through veterinary extension services.<sup>164</sup>

American researchers and anthropologists expected that the Marsh Arabs would re-migrate after the return of water to many areas and the provision of social services.<sup>165</sup> Initially people moved quickly to areas which had been re-flooded and took up boating, fishing, and reed-harvesting

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<sup>161</sup> Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>162</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting the Marsh Dwellers and Restoring the Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003). [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

<sup>163</sup> Ibid

<sup>164</sup> DAI: International Development, *Iraq-Marshlands Restoration Project (IMRP)*, (Accessed June 25, 2017), <https://www.dai.com/our-work/projects/iraq-marshlands-restoration-project-imrp>.

<sup>165</sup> Curtis J. Richardson and Najah A. Hussain, "Restoring the Garden of Eden: An Ecological Assessment of the Marshes of Iraq." *Bio Science* Volume 56, Issue 6, 1 June 2006. [https://doi.org/10.1641/0006-3568\(2006\)56\[477:RTGOEA\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2006)56[477:RTGOEA]2.0.CO;2).

where sufficient reeds were available.<sup>166</sup> Thus, the US government believed that the wetlands were being provided with all the needed repair efforts, including ecological, social, and economic support.

### **5.3 The Effect of the US-led Restoration Program on the Culture of the Marsh Arabs**

The project mandate targeted social and ecological restoration, implicitly assuming that cultural restoration would follow automatically. The ecological ramifications have been readily apparent. As mentioned previously, culture is a complex matter and assuming it will be restored as a result of just ecological restoration reflects a shallow interpretation of the concept. The project's shortcomings are indicative of a failure to consider the impact the 1992 destruction on the culture of native inhabitants:

After initially returning to the wetlands, many of the Marsh opted to re-return to where they had migrated after 1992.<sup>167</sup> Within this framework, A USAID-conducted an opinion poll to determine the specific hopes and aspirations of the populace and concluded that there was a generational gap regarding life and work in the southern marshlands. The USAID survey indicated that people in their 40s or older, who were born and raised in the wetlands, are more eager and enthusiastic to see the wetlands restored than people under 25. The former group had been mainly involved in agriculture and was keen to see further agricultural development.<sup>168</sup> The study divided the participants aged between 25 and 40 into two different groups. The first consisted of the younger individuals who had never lived in the wetlands, and only returned with

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<sup>166</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting The Marsh Dwellers and Restoring The Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003), [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

<sup>167</sup>Sam Kubba, *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment* (United Kingdom: Ithaca Press, 2011).

<sup>168</sup>*Ibid*

their families. It is worth noting the study observed that in some cases, those younger individuals left their parents at the marshlands and re-returned to the area from which they migrated. Some of these youths explained they were more interested in returning and living in Basra, as it is more developed and has better services than the wetlands.<sup>169</sup> The second group consisted of individuals who grew up in the marshes but left in their 20s. Most of them explained they had already obtained a livelihood in the areas where they migrated and that living in the marshlands was quite challenging for them. This means most of the people who stayed in the marshlands after the restoration are above the age of 40, with the majority in their 50s.<sup>170</sup>

These results show an alarming trend, confirming that the younger age group between 25 and 40 does not have the sufficient traditional ecological knowledge required to sustain the flourish of their land-based culture. This is reflected in the choice of jobs. For example, as explained in the previous chapter, younger girls have a very limited knowledge of the agriculture, fishing and mat-weaving, which had long been the main economic pursuits of the Marsh Arab culture.

It is important to reiterate scholars consider TEK to be the body of knowledge and practice about the relationship between individuals and their environment that evolved from adaptive processes and handed down through generations by cultural transmission. Traditional ecological knowledge is both cumulative and dynamic, building on experience and deriving from careful observation and adaptive interactions with the land. Indigenous people have used their local environmental knowledge to sustain their culture and deliberately manage resources over

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<sup>169</sup> Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development, *Strategies for Assisting the Marsh Dwellers and Restoring the Marshlands in Southern Iraq- Interim Status Report* (New York, Sep, 2003).  
[http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

<sup>170</sup> Ibid

turbulent periods of time.<sup>171</sup> As explained by the study submitted by ESA: “It may take only one generation for these practices to be forgotten, as the younger generation is not being taught how to perform them.” A tribal leader opined “women would not return to the marshes... They do not know how to live there anymore.”<sup>172</sup>

The lack of transmission of TEK signals that subsequent generation will not be able to sustain the culture of their ancestors. Hence the wetlands are not witnessing cultural change; on the contrary, they are experiencing cultural loss.<sup>173</sup>

This research has reached the conclusion that implementing methods or channels to sustain TEK is an impossible task. Previous chapters have shown that traditional ecological knowledge can be passed on to younger generations orally and through practice. Trying to restore the processes for passing TEK to younger individuals is very critical. Indeed, the US could potentially have constructed schools to teach young Marsh Arabs the skills of farming and fishing. However, this could also be interpreted as a shallow method of passing on the knowledge to younger generations who have missed out on the direct contact with the land. Historically, their parents did not teach economic skills in traditional schools; youth learned how to fish while actively engaging with the wetlands. This whole structure was lost after the 1992 destruction of the wetlands, and the daily routine was interrupted.

Second, the US-led program imported a myriad of foreign experts to manage the work of restoring the land. But the Marsh Arabs are the masters of the land; they have absolute,

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<sup>171</sup> Rene Senos, Frank K. Lake, Nancy Turner and Dennis Martinez, “Chapter 17: Traditional Ecological Knowledge and Restoration Practice,” *Restoring the Pacific Northwest: The Arts and Science of Ecological Restoration in Cascadia*, ed. Dean Apostol and Marcia Sinclair (Island press) p393- 420.

<sup>172</sup> Ecosystem Health and Sustainability, *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens, (March 24, 2016. Accessed September 26, 2017), 2017.  
<http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.

<sup>173</sup> Ibid

comprehensive knowledge down to the smallest details. Relying on foreign experts instead of the voices of the Marsh dwellers was a significant mistake. First, the indigenous population would have had more accurate input regarding the ecological issues. Second, they would have had an opportunity to voice their needs and concerns, which could have actually facilitated the implementation of a holistic restoration approach.<sup>174</sup> Indeed, while their culture was highly shaped by the surrounding ecological setting, it was the Marsh Arabs themselves who managed the ecological resources, a process which only reflected their cultural traits afterwards. In other words, the relationship between the land and culture is determined by the inhabitants of this land. An indicative example is the marginalized role of the Mudhif house since the restoration began. Despite its cultural significance as a space of education and socialization, these institutions have not been rebuilt since the restoration process began. Without the Mudhif houses, the dissemination of oral history and TEK has been limited. Though the ecological aspect of the marshland was central to the Marsh Arabs, it was their interaction with and management of the environment which generated their unique culture. Privileging international experts over the local population itself severely limited the success of the restoration project's social goals. In conclusion, it is quite apparent that the ecological restoration, significant as it may be, and the accompanying social development projects have not been sufficient to restore the culture. The American-led restoration program is an artificial restoration that does not touch upon the relationship between the people and the land. It only reconstructed the land because the relationship could not be so easily reconstructed. Restorations are not natural; they are artificial. Culture is a far more complex and dynamic phenomenon and restoring it artificially would be an

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<sup>174</sup> Andre Light, "Ecological restoration and the culture of nature," *Restoring nature: perspectives from the social sciences and humanities*, edited by Bruce Hall and Paul H. Gobster, Island press, <https://goo.gl/Uaqxzw>.

impossible task. In the final chapter, I will elaborate on the impossibility of restoring a culture, even if the land is restored.



## Chapter Six

### Conclusion

What the Marsh Arabs have experienced since 1992 is the disconnection between the people and the land. The Marsh Arabs, whose lives and culture depended on the land, became disconnected from the very land that sustained major aspects of this community's life. This disconnection is the result of Hussein's destructive development project and the failures of the US-led restoration program. Even though both Hussein and the US undertook these projects in the name of "development" or "national improvement," both caused harm to the land and the people.

The major difference between the development and the restoration project is that the restoration project actually intended to restore the land through a plan which gained the support of the international community. However, this thesis views that restoration as an artificial restoration, while acknowledging the differing ideas and viewpoints of restoration which exist in the academic literature. Restoration, by definition, seeks to recreate landscapes or ecosystems which once previously existed at a particular site but have now been lost (e.g., wetlands, tall grass prairies, and various riparian systems).<sup>175</sup>

When analyzed through an anthropological lens, the topic of restoration has gained mixed reactions from different schools, reflecting the controversy surrounding the idea. However, there is a school that actually opposes the idea of restoration, explaining that ecological restoration does not result in a restoration of "nature," and further that it may even harm nature. This possibility is a subject worthy of moral consideration.<sup>176</sup> As illustrated from previous restoration programs, the end result of such attempts may be negative.<sup>177</sup> Realistically, restoration can never

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<sup>175</sup> Andre Light, "Ecological restoration and the culture of nature," *Restoring nature: perspectives from the social sciences and humanities*, edited by Bruce Hall and Paul H. Gobster, Island press, <https://goo.gl/Uaqxzw>.

<sup>176</sup> Ibid

<sup>177</sup> Ibid

duplicate the value of the original nature which has been lost. As human productions, the objects of restoration are closer on the metaphysical spectrum to artifacts than nature. To put it differently, they are merely artifacts with a fleshy green cover.

In this thesis, the concept of culture was always approached in tandem with the centrality of the inhabitants themselves. The relationship between culture and land is mediated by the inhabitants. In the case of the Marsh Arabs, this population is indigenous to Iraq. They, like other indigenous populations, manage their ecological setting or the environment and as a result, produce certain traits and behaviors which form the general framework of culture. Thus, since indigenous peoples are vital to the equation or the relationship between culture and land, they then must play an integral role in achieving holistic restoration. As a matter of fact, they should lead the process of restoration.

One manifestation of the role of indigenous peoples as central to maintenance and restoration of culture is the transmission of TEK. Several restoration programs attempted to approach the issue of TEK transmission through establishing schools for younger individuals, which targeted reviving lost skills or lost languages. However, this method can be seen as tackling transmission of TEK from a shallow perspective, because the process is a far more complex and dynamic framework than what could be achieved by merely establishing schools. TEK should be tackled in the real life of everyday activities and routine with parents and elders people of the community.

From all of the above, I conclude that holistic restoration ambitions which include elements of cultural restoration cannot be achieved through traditional ecological means. The community itself, particularly the indigenous peoples of the affected area, would be capable of restoring land or the ecological setting if given the resources. In the meantime, their culture would face the

familiar feature of cultural change until it reaches a new balance with the ecological setting.

Climate change and environmental distress will continue to impose changes on a community, but as mentioned earlier, culture will naturally find a way to reach its own balance. Culture is an adaptive system, one which naturally adapts to reach equilibrium within ecosystems. Yet, when these balances are disturbed by environmental, demographic, technological, or other systemic actions, drastic changes are seen within cultural systems. Feedback mechanisms in cultural systems may thus operate both negatively, toward self-correction and equilibrium, or positively, toward disequilibrium and directional change.<sup>178</sup>

The Marsh Arabs suffered from a deliberate destruction of their land, resulting in cultural damage. This cultural damage was ostensibly supposed to be restored by the 2003 US restoration program. On the contrary, however, it led to more deterioration. From a broader perspective, the concept that restoring the land will eventually restore the culture has proven to be inaccurate. According to previously examined theories, the environment does play a vital role in forming the culture, but this process happens through the relationship between the inhabitants and the environment. Culture, as waves of responses from the interaction between the inhabitants and the land, cannot be restored by simply restoring the land. Culture, as an adaptive system, is apt to move through phases of change until it reaches its balance. Such equilibrium again hinges on the inhabitants and occurs only without the interference of external restoration programs painting the environment and the culture with a new, artificial appearance.

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<sup>178</sup> Roger M Keesing, "Theories of Culture," *Annual Review of Anthropology* Vol. 3 (1974), 73-97, <https://is.muni.cz/el/1423/jaro2007/SAN206/um/Keesing-Theories-Culture-ARA-1974.pdf>.

## Bibliography

- Ahmed, Nafeez. "Iraqi Invasion was about Oil." *The Guardian*, 20 March 2014, <https://www.theguardian.com/environment/earth-insight/2014/mar/20/iraq-war-oil-resources-energy-peak-scarcity-economy>.
- Aoki, Chizuru, Ali Al-Lambi, and Sivapragasam Kugaprasatham. "Environmental management of the Iraqi marshlands in the post-conflict period." *Peace building and Natural Resource Management*. Environmental Law Institute and United Nations Environment Programme. October 2014.
- "Article 2. Use of Terms." Convention on Biological Diversity. Accessed October 08, 2017. <https://www.cbd.int/convention/articles/default.shtml?a=cbd-02>.
- Béteille, André, "The Idea of Indigenous People," *Current Anthropology*, 39, no. 2, April 1998, 187-192. <https://doi.org/10.1086/204717>.
- Black, Ian. "Iran and Iraq remember war that cost more than a million lives." *The Guardian*, 23 September 2010. Accessed September 25, 2017. <https://www.theguardian.com/world/2010/sep/23/iran-iraq-war-anniversary>.
- Bureau for Asia and the Near East Integrated Water and Coastal Resources Management IQC U.S. Agency for International Development. *Strategies for Assisting The Marsh Dwellers and Restoring The Marshlands in Southern Iraq- Interim Status Report*. United States of America. 2003. [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).
- Bylander, Maryann. "Depending on the Sky: Environmental Distress, Migration, and Coping in Rural Cambodia." *International Migration* Vol. 53 (5) 2015. <http://onlinelibrary.wiley.com/doi/10.1111/imig.12087/epdf>

- Cultural Survival. *Wetlands Restoration Brings Iraq's Marsh Arabs Home*. 2004.  
<https://www.culturalsurvival.org/news/steve-grove/wetlands-restoration-brings-iraq-s-marsh-arabs-home>
- DAI: International Development. *Iraq-Marshlands Restoration Project (IMRP)*. Accessed June 25, 2017. <https://www.dai.com/our-work/projects/iraq-marshlands-restoration-project-imrp>.
- Davidson-Hunt, Iain J., and Fikret Berkes. "Nature and Society through the Lens of Resilience: toward a Human-in-Ecosystem Perspective." Chapter. In *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*, edited by Fikret Berkes, Johan Colding, and Carl Folke, 53–82. Cambridge: Cambridge University Press, 2002.  
doi:10.1017/CBO9780511541957.006.
- "Dictionary of Multicultural Psychology: Issues, Terms, and Concepts."  
<http://sk.sagepub.com/reference/dictionary-of-multicultural-psychology/n57.xml>
- "Diopara," Encyclopedia Princetoniensis: The Princeton Encyclopedia of self-determination,  
<https://pesd.princeton.edu/?q=node/232>
- Ecosystem Health and Sustainability. *Effects of Mesopotamian Marsh (Iraq) desiccation on the cultural knowledge and livelihood of Marsh Arab women* by Nadia Al-Mudaffar, Kelly P. Goodwin, Bayan A. Mahdi, and Michelle L. Stevens. March 24, 2016. Accessed September 26, 2017. <http://onlinelibrary.wiley.com/doi/10.1002/ehs2.1207/full>.
- El Gamal, Rania. "FEATURE-Iraqi tribal disputes pose new challenge to oil firms. *Reuters*, 29 May 2011. Accessed 30 Oct 2017. <http://www.reuters.com/article/iraq-oil-tribes/feature-iraqi-tribal-disputes-pose-new-challenge-to-oil-firms-idUSLDE74P0GZ20110529?irpc=932>

Elwell, Frank and Brian Andrews. "Cultural Materialism." *Oxford Bibliographies*. Last modified: 28 September 2016.  
<http://www.oxfordbibliographies.com/view/document/obo-9780199766567/obo-9780199766567-0154.xml>

"Encyclopædia Britannica." Cultural diffusion. Accessed November 04, 2017.  
<https://www.britannica.com/topic/cultural-diffusion>.

Eversole, Robyn, John Andrew Mc Neish and Albert D Cimadamore, eds. "Overview patterns of indigenous disadvantage worldwide Indigenous peoples and poverty: an international perspective," ed. Robert Eversole, (London, Zed Book, 2006),  
<http://www.crop.org/viewfile.aspx?id=98>.

Figueroa, Robert Melchior. "Indigenous Peoples and Cultural Losses." *Scholarly Research Reviews*. Accessed October 04, 2017.  
<http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199566600.001.0001/oxfordhb-9780199566600-e-16>.

Fikentscher, Wolfgang, "Chapter 05," in *Theories of culture and cultures*, Munich Law and Anthropology - Outlines, Issues, Suggestions, (2008),  
[http://works.bepress.com/wolfgang\\_fikentscher/5/](http://works.bepress.com/wolfgang_fikentscher/5/).

France L Robert, "Place-based performance and ecological restoration," *Healing Natures, Repairing Relationships* (Truro: Libri Publishing), Accessed June 26, 2017. ProQuest Ebook Central.

Gregory, Robin and William Trousdale. "Compensating aboriginal cultural losses: an alternative approach to assessing environmental damage." *Journal of Environmental Management*.  
<https://www.cip-icu.ca/Files/Awards/Planning-Excellence/2010-HM-Planning-Publications.aspx>.

Human Rights Watch. *Endless Torment: The 1991 Uprising in Iraq and Its Aftermath* by Eric Goldestein. HRW. 1991. <https://www.hrw.org/reports/1992/Iraq926.htm>.

Human Rights Watch Briefing Paper. *The Iraqi government assault on the Marsh Arabs*. Jan 2003. <http://www.europarl.europa.eu/meetdocs/committees/afet/20040405/hrw%20marshlands.pdf>.

Inglehart, Ronald and Wayne E. Baker. "Modernization, Cultural Change, and the Persistence of Traditional Values," *American Sociological Review* Vol. 65, No. 1, Looking Forward, Looking Back: Continuity and Change at the Turn of the Millenium (Feb., 2000). [https://www.jstor.org/stable/2657288?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/2657288?seq=1#page_scan_tab_contents)

Inter displacement Center and Norwegian Refugee Council. *IRAQ: Little new displacement but around 2.8 million Iraqis remain internally displaced, A profile of the internal displacement situation*. Norwegian Refugee Council. 2004. <http://www.internal-displacement.org/assets/library/Middle-East/Iraq/pdf/Iraq-March-2010.pdf>.

Keesing, M. Roger. "Theories of Culture." *Annual Review of Anthropology* Vol. 3 (1974), 73-97. <https://is.muni.cz/el/1423/jaro2007/SAN206/um/Keesing-Theories-Culture-ARA-1974.pdf>.

Kelly, Katherine M. "Declaring War on the Environment: The Failure of International Environmental Treaties During the Persian Gulf War." *American University International Law Review* Vol 7, issue no. 4 (1992): 921-950 <http://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1533&context=auilr>

Johns, Dave. "The Crimes of Saddam Hussein." *Frontline World*, 24 January 2006. Accessed September 25, 2017. [http://www.pbs.org/frontlineworld/stories/iraq501/events\\_marsh.html](http://www.pbs.org/frontlineworld/stories/iraq501/events_marsh.html).

- Kubba, Sam. *The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment*. United Kingdom: Ithaca Press, 2011.
- Kuokkanen, Rauna. "Indigenous Economies, Theories of Subsistence, and Women: Exploring the Social Economy Model for Indigenous Governance." *American Indian Quarterly* 35, 35 n2 (2011), p215-240, doi:10.5250/amerindiquar.35.2.0215.
- Lathrap, Donald W. "Reviewed Work: Amazonia: Man and Culture in a Counterfeit Paradise by Betty J. Meggers." *American Anthropologist*, Vol. 75, No. 4 (Aug., 1973). Accessed November 12, 2017. <http://www.jstor.org/stable/673137>.
- Light, Andre, "Ecological restoration and the culture of nature," *Restoring nature: perspectives from the social sciences and humanities*, edited by Bruce Hall and Paul H. Gobster, Island press, <https://goo.gl/Uaqxzw>.
- Long , Heather and Kelly Chakov, "Department of Anthropology University of Alabama," *Social Evolutionism*.  
<http://anthropology.ua.edu/cultures/cultures.php?culture=Social%20Evolutionism>.
- Mannion, Antoinette. *Global Environmental Change: A Natural and Cultural Environmental History*. United States of America: Route ledge Taylor and Francise group, 1991. Second edition. <https://goo.gl/EFApoe>.
- Markey, Patrick and Jon Loades-Carter. "Iraqi tribal disputes pose new challenge to oil firms." *Reuters*. May 29, 2011. Accessed September 26, 2017. <http://www.reuters.com/article/us-iraq-oil-tribes/iraqi-tribal-disputes-pose-new-challenge-to-oil-firms-idUSTRE74S0RP20110529>.
- Marr, Phebe and Ibrahim Al-Marashi. *The Modern History of Iraq*. Fourth Edition. Avalon Publishing, 2017.



Pérez, Juan Carlos and Velasco Pavón. "Economic behavior of indigenous peoples: the Mexican case" *Latin American Economic Review*. Volume 23, 2014, Number 1, p. 1.

Salim, S.M. *Marsh Dwellers of the Euphrates Delta*. (London School of Economics Monographs on Social Anthropology, no. 23), pp.x 4- 157. ill. 8. Maps 3. London, Athlone Press.

"Sanctions against Iraq." Global Policy Forum, <https://www.globalpolicy.org/previous-issues-and-debate-on-iraq/sanctions-against-iraq.html>.

"Open Society Foundation." Strategic litigation impacts: indigenous peoples' land rights, Open Society Foundations Publications.  
<https://www.opensocietyfoundations.org/sites/default/files/slip-land-rights-20170424.pdf>.

"Oil in Iraq." Global Policy Forum, <https://www.globalpolicy.org/political-issues-in-iraq/oil-in-iraq.html>.

Richardson, Curtis J. and Najah A. Hussain. "Restoring the Garden of Eden: An Ecological Assessment of the Marshes of Iraq." *Bio Science* Volume 56, Issue 6, 1 June 2006.  
[https://doi.org/10.1641/0006-3568\(2006\)56\[477:RTGOEA\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2006)56[477:RTGOEA]2.0.CO;2).

Santora, Marc. "Aftereffects: Southern Iraq; Marsh Arabs Cling to Memories of a Culture Nearly Crushed by Huessein." *The New York Times*.  
<http://www.nytimes.com/2003/04/28/world/aftereffects-southern-iraq-marsh-arabs-cling-memories-culture-nearly-crushed.html>.

Schwabsh, Aron. "Ecocide and Genocide in Iraq: International Law, the Marsh Arabs, and Environmental Damage in Non-International Conflicts." *Colorado Journal of International Environmental Law & Policy* Vol. 27 forthcoming, TJSL Public Law

Research Paper No. 03-08 (2003).

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=442541](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=442541).

Schwartz, Shalom H. "An Overview of the Schwartz Theory of Basic Values." *Online Readings in Psychology and Culture*. 2(1). <https://doi.org/10.9707/2307-0919.1116>.

Schwartzstein, Peter. "Iraq's Marsh Arabs test the waters as wetlands ruined by Saddam are reborn." *The Guardian*. January 18, 2017. Accessed September 26, 2017.  
<https://www.theguardian.com/global-development/2017/jan/18/iraq-marsh-arabs-test-the-waters-wetlands-ruined-by-saddam-reborn-southern-marshes>.

Schwartzstein, Peter, "Iraq's Famed Marshes Are Disappearing—Again." *National Geographic*. July 9, 2015, Accessed Dec 25, 2017.  
<https://news.nationalgeographic.com/2015/07/150709-iraq-marsh-arabs-middle-east-water-environment-world/>

Senos, Rene, Frank K. Lake, Nancy Turner, Dennis Martinez, "Chapter 17: Traditional Ecological Knowledge and Restoration Practice," *Restoring the Pacific Northwest: The Arts and Science of Ecological Restoration in Cascadia*, ed. Dean Apostol and Marcia Sinclair (Island press) p393- 420.

"SPIEGEL ONLINE Hamburg." Photo Gallery: Hope for Iraq's Marshes. SPIEGEL ONLINE. July 30, 2010. <http://www.spiegel.de/fotostrecke/photo-gallery-hope-for-iraq-s-marshes-fotostrecke-57722.html>.

Steward, Julian Haynes, *Theory of Cultural change: The Methodology of Multilinear Evolution*. United States of America: University of Illinois Press, 1971.

Sutton, Mark Q. and E. N. Anderson. *Introduction to Cultural Ecology*. United Kingdom: Al Tamira Press London, 2014. Third edition. <https://goo.gl/RcQ6Y8>

Turner, Nancy J., Marianne Boelscher Ignace, Ronald Ignace. "Traditional Ecological Knowledge and Wisdom of Aboriginal Peoples in British Columbia." *Ecological Applications* Vol. 10, No. 5 Oct., 2000. pp. 1275-1287, [https://www.fws.gov/nativeamerican/pdf/tek\\_turner-2000.pdf](https://www.fws.gov/nativeamerican/pdf/tek_turner-2000.pdf).

"The Marsh Arabs of Iraq: Hussein's Lesser Known Victims," United States Institute of Peace, Last modified: November 25, 2002, <https://www.usip.org/press/2002/11/marsh-arabs-iraq-husseins-lesser-known-victims>.

UNEP in Iraq, *Post Conflict Assessment, Clean up and Post Construction*. Kenya. 2007. <http://postconflict.unep.ch/publications/Iraq.pdf>.

"UNEP Stories: Iraq's Marsh Arabs more optimistic after World Heritage status." UN Environment. November 23, 2016. Accessed October 01, 2017, <http://www.unep.org/stories/story/iraq%E2%80%99s-marsh-arabs-more-optimistic-after-world-heritage-status>.

United Nations Environmental Program. *The Mesopotamian Marshlands: Demise of an Ecosystem* by Hassan Patrow, Switzerland. <http://www.grid.unep.ch/activities/sustainable/tigris/mesopotamia.pdf>.

"Human Rights Questions: Human Rights Situations and Reports of Special Rapporteurs and Representatives: Situation of Human Rights in Iraq," United Nations: General Assembly, last modified 15 October 1996, <http://www.un.org/documents/ga/docs/51/plenary/a51-496.htm>.

United States Institute of Peace. *The Marsh Arabs of Iraq: Hussein's Lesser Known Victims*. United Kingdom. 2016. <https://www.usip.org/press/2002/11/marsh-arabs-iraq-husseins-lesser-known-victims>.

USAID. *Strategies for Assisting The Marsh Dwellers and Restoring the Marshlands in Southern Iraq Interim Status Report*. 2003. [http://pdf.usaid.gov/pdf\\_docs/Pdacf082.pdf](http://pdf.usaid.gov/pdf_docs/Pdacf082.pdf).

Wahab, E. O., S. O. Odunsi, O. E. Ajiboye, "Causes and Consequences of Rapid Erosion of Cultural Values in a Traditional African Society." *Journal of Anthropology* Volume 2012 (2012), Article ID 327061. 7 pages. <http://dx.doi.org/10.1155/2012/327061>.

Whalen, Kevin. "Finding the Balance: Student Voices and Cultural Loss at Sherman Institute." *American Behavioral Scientist* Vol 58, Issue 1.  
<http://journals.sagepub.com/doi/abs/10.1177/0002764213495026#articleCitationDownloadContainer>.

Wood, Michael. "Saddam drains the life of the Marsh Arabs: The Arabs of southern Iraq cannot endure their villages being bombed and their land being poisoned, and are seeking refuge in Iran. Michael Wood reports from Huwaiza Marsh on the death of a 5,000-year-old culture." *The Independent*. August 27, 1993. Accessed September 26, 2017.  
<http://www.independent.co.uk/news/world/saddam-drains-the-life-of-the-marsh-arabs-the-arabs-of-southern-iraq-cannot-endure-their-villages-1463823.html>.

Zeidel, Ronen. "Implications of the Iran-Iraq War." *E-International Relations*, October 27, 2013. Accessed July 03, 2017. <http://www.e-ir.info/2013/10/07/implications-of-the-iran-iraq-war/>.